FREDONIA
STATE UNIVERSITY OF NEW YORK

International Business Analytics Conference for Academic and Industry Professionals 2025

Fredonia, New York

Thursday – Friday, May 8 - 9

Conference Website: www.fredonia.edu/ibac
Conference Email: ibac@fredonia.edu

INTERNATIONAL BUSINESS ANALYTICS CONFERENCE FREDONIA
IBAC

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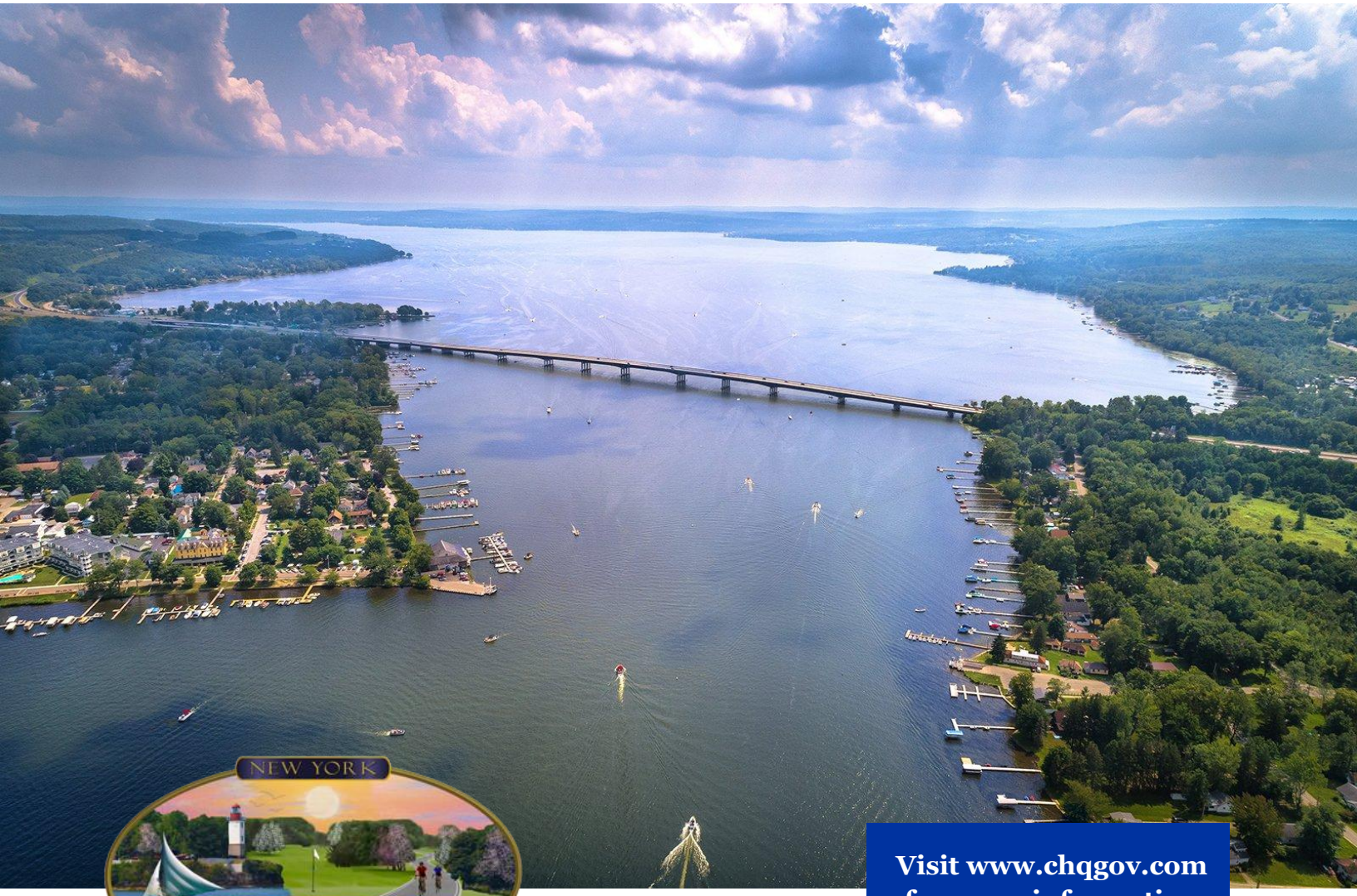
Chautauqua County is supporting the International Business Analytics Conference through a tourism grant designed to “increase tourism, conventions, trade shows, special events, and other directly related or supporting activities.”

The County supports the "development of distinct themes or significant events and attractions that enhance the level of visitor experience," and ultimately the number of visitors to the County.

We thank Chautauqua County leaders for supporting this inaugural event.



Visit www.chqgov.com for more information on local attractions!

State University of New York at Fredonia

Founded in 1826, The State University of New York at Fredonia is one of the jewels of the SUNY system, known for its welcoming atmosphere, distinguished faculty, and beautiful campus. With affordable tuition and housing in a classic "college town," the State University of New York at Fredonia gives students the academic challenges of a selective university committed to developing their character and preparing them for a rewarding career.

Fredonia offers a complete college experience -- a "destination university" in a creative environment that is diverse, welcoming, and safe. It helps students become uniquely connected to classmates, professors, and the community. The vibrant campus features comfortable residence halls, delicious dining options, and an abundance of extracurricular options to keep your evenings and weekends as stimulating as your daily studies.

Fredonia has over 80 undergraduate and graduate programs, along with 50+ minors and 13 cooperative programs, designed to help students reach their full potential**.** Fredonia's 14:1 student faculty ratio provides the personal attention students expect in a small private school, delivered at a public college ranked by national publications like Money magazine, Princeton Review, Kiplinger's, and U.S. News & World Reporter for quality and affordability.

Visit www.fredonia.edu for more information!

Table of Contents

Welcome Letter from President Kolison

Welcome to the second year of the International Business Analytics Conference! I am thrilled that you have joined us for this timely and very important event, where scholars and business professionals come together to explore and bridge the gap between industry expertise and academic research in business analytics.

On behalf of the faculty, staff, and students at State University of New York at Fredonia, I extend my warmest welcome to all attendees, including students, scholars, academics, and industry experts. Through this platform, we aim to foster connections among local, regional, and international communities. By cultivating a vibrant global analytics community, the conference promotes collaboration and knowledge exchange, while providing meaningful opportunities for students to deepen their understanding and activities with real-world implications. We hope that you will carry this knowledge and experience back to your respective institutions and workplaces, aiding our collective endeavor towards the advancement of the analytics field.

A special thank you to our sponsors, whose generous support has made this conference possible. Thank you all for joining us here at the State University of New York at Fredonia. Working together, we will make the International Business Analytics Conference an annual event, and it is our intention to be its proud home.

Very truly yours,

Stephen H. Kolison Jr. Ph.D.
President of SUNY Fredonia
Professor of Economics
State University of New York Fredonia

Welcome Letter from Provost Horowitz

Welcome to IBAC 2025—where we have created a platform where data meets decision-making, and innovation meets impact!

On behalf of the Provost's Office, I am pleased to welcome you to the second annual **International Business Analytics Conference (IBAC)** at SUNY Fredonia

The School of Business and IBAC 2025 are pleased to continue the conference's mission to foster collaboration between academic scholars and industry leaders through meaningful exchange and partnership. Fredonia's IBAC serves as a platform for percolating innovative ideas, sharing cutting-edge research, and exploring best practices in **business and data analytics** across a wide range of programs, fields and expertise—including healthcare, finance and accounting, marketing, computer science, and music industry.

At IBAC, we hope that experts in the field and our faculty will form **Academia-Industry Partnerships.** I invite you to engage with peers and colleagues to share your expertise, and build new connections that can drive the future of analytics and inform academia. Whether you are here to present your work, learn from others, or find new colleagues, your presence enriches the collective experience of our conference.

I look forward to the discovery, insight, and inspiration that will no doubt come from this meeting.

Warm regards,

Judith M. Horowitz, Ph.D.
Interim Provost and Vice President for Academic Affairs
Professor of Psychology
The State University of New York at Fredonia

Welcome Letter from Dean Misra

On behalf of the organizing committee and the Fredonia School of Business, it is my pleasure to welcome you to the annual International Business Analytics Conference (IBAC). As someone deeply passionate about community development, I am thrilled that IBAC continues to bring together a dynamic and diverse group of scholars, practitioners, and students from around the world. This conference is a unique opportunity to share knowledge, exchange ideas, and explore the innovations shaping the future of analytics.

Founded with the vision of building a vibrant global network, IBAC bridges academic research with real-world practice. It serves as a distinctive platform where insights meet application, and where emerging trends in data-driven decision-making are explored across industries and disciplines. This year's program includes cutting-edge research presentations, engaging industry panels, student-focused sessions, and ample opportunities for meaningful collaboration. It's truly exciting to see regional employers actively participating to recruit talent for internships, as well as full-time and part-time positions in analytics.

Your participation enriches the dialogue and strengthens the growing analytics community, a community committed to advancing impactful, data-informed solutions. Whether you are here to present, learn, or connect, we hope this experience proves rewarding and inspiring.

Thank you for being part of IBAC. We look forward to learning with you and shaping the future of analytics together.

Best,

Kaustav Misra, Ph.D.
Dean, School of Business
Professor for Economics
State University of New York Fredonia
misra@fredonia.edu

Conference at a Glance

The International Business Analytics Conference (IBAC) successfully hosted its inaugural event at SUNY Fredonia on May 3-4, 2024. This landmark conference established a unique platform designed to bridge the gap between academic scholarship and industry practice in the field of business and data analytics through meaningful Academia-Industry partnerships. By convening industry professionals and academic experts, IBAC fostered valuable dialogue and collaboration within the dynamic and rapidly evolving discipline of business analytics.

The conference welcomed submissions across a broad spectrum of topics related to both research and industry applications in business and data analytics. Areas of focus included, but were not limited to, Accounting, Business and Management, Computer Science/Management Information Systems, Economics, Finance and Insurance, Education, Healthcare, Marketing, Music and Entertainment, and Sport Management. In its first year, IBAC attracted 189 participants, demonstrating strong interest and confirming the demand for a forum of this kind. Encouraged by this positive response, the conference is set to become an annual event.

The 2025 IBAC conference is scheduled for May 8-9, with plans to further expand participation and engagement. We are pleased to witness growing support from local and regional businesses, whose involvement continues to strengthen the conference's impact and reach. Additionally, IBAC 2025 will introduce two new and highly anticipated components: Undergraduate Poster Sessions and an Analytics Career Fair, both of which have generated considerable enthusiasm from students and industry partners alike.

For example, submission specifically addressed research or current business practices in:

- Data-driven decision-making
- Predictive and prescriptive analytics
- Artificial Intelligence and Machine Learning in business
- Big data analytics and its applications
- Business Intelligence and data visualization
- Data mining and pattern recognition
- Text and sentiment analysis in business
- Supply chain analytics and logistics optimization
- Marketing and customer analytics
- Risk management and fraud detection
- Ethics and privacy in business analysis

Proceedings and Publication Opportunity: We are pleased to announce that this year, IBAC is collaborating with *Empirical Economics Letters* (indexed by the Australian Business Deans Council, Rating: C, http://www.eel.my100megs.com/) to publish all conference proceedings. In addition, authors will have the opportunity to submit their articles for publication in this journal under a special issue edited by Drs. Kaustav Misra and Justin Mindzek.

Conference Executive Committee

Organizing Committee

Conference Chair:
Kaustav Misra (Dean, School of Business)

Conference Vice Chair:
Justin Mindzak (School of Business - Accounting)

Program Chairs:
Syed Haider (Computer and Information Sciences)
Adam Cook (School of Business - Economics)

Undergraduate Program Chairs:
Lisa Walters (School of Business - Management)
Megan Johnson (Mathematical Sciences)

Career Fair Chair:
Christopher LaGrow (Career Development)

Administrative Support:
Mindy Ostrander and Kristie Bobik
(School of Business)

Program Committee

Publicity:
Charles Cornell (CIED)
Fredonia Marketing and Communication Team

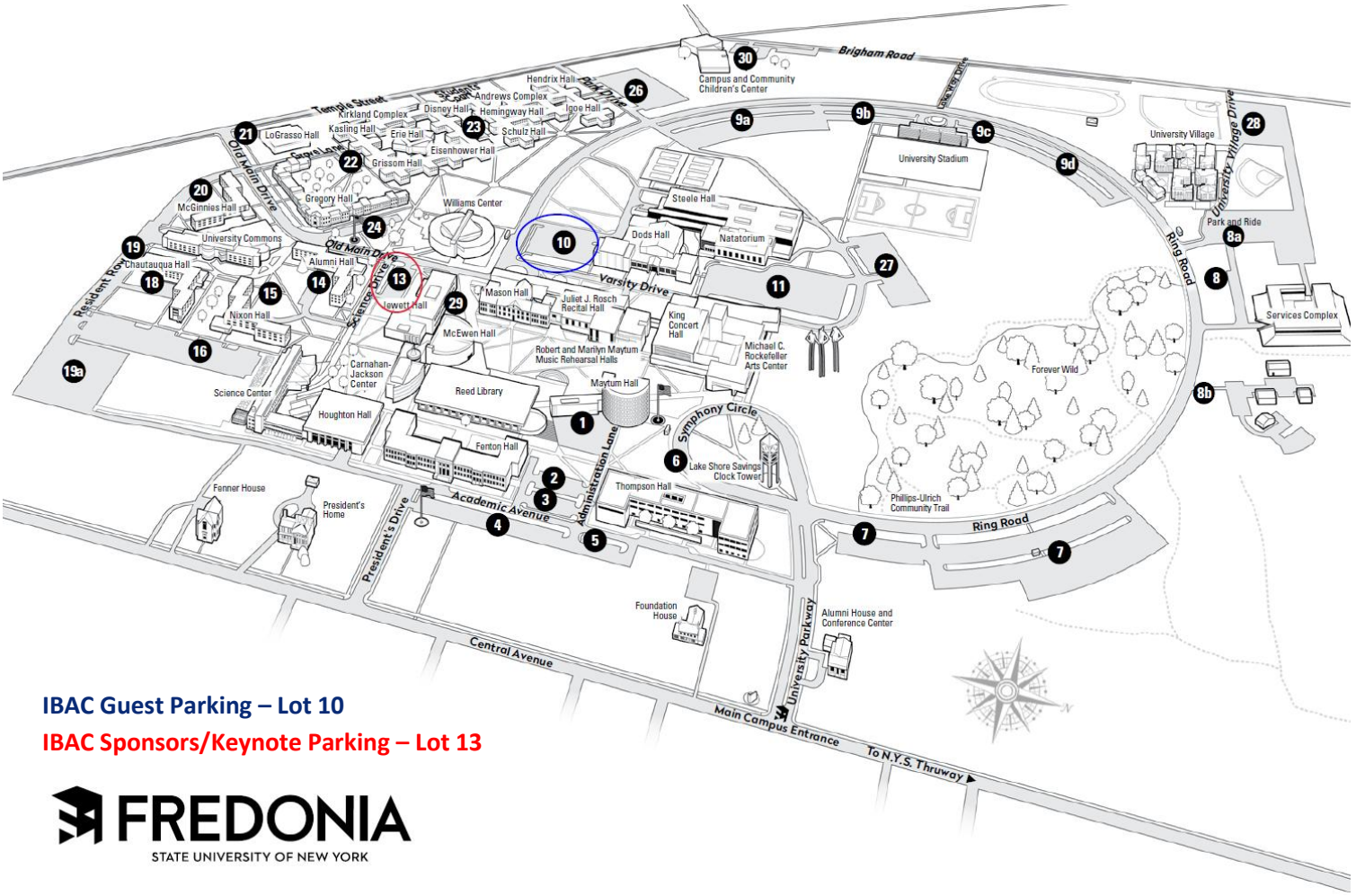
Finance Chair:
Neepa Gaekwad Babulal (School of Business - Economics)

Event Management:
Mark Delcamp (Facilities Services), Jeff Walter and Katie Thies (FSA), Mark Suida (Campus Life), John McCune (Information Technology), Kathy Forster (Residence Life), Mark Mackey (ITS),

Advisory Member:
Mohammad Nasim

Conference Venue

Designated Parking:



IBAC Guest Parking – Lot 10

IBAC Sponsors/Keynote Parking – Lot 13

FREDONIA
STATE UNIVERSITY OF NEW YORK

Campus Map

ACADEMIC AND ADMINISTRATIVE

2 Lanford House

3 Foundation House
Fredonia College Foundation

4 Alumni House and Conference Center

5 Thompson Hall
College of Education, Health Sciences, and Human Services
Communication Disorders and Sciences
History
Information Technology Services and Service Center
International Education
ResNet
School of Business
Social Sciences

6 Fenton Hall
English
Extended Learning
World Languages and Cultures
Philosophy
President's Office

7 Houghton Hall
Computer and Information Sciences
Geosciences
Mathematical Sciences
Physics

8 Science Center
Biology
Biochemistry and Chemistry

9 Carnahan-Jackson Center
Learning Center

10 Reed Library
Academic Advising
Registrar's Office

11 Maytum Hall
Academic Affairs
Accounting/Accounts Payable
Admissions Office
Budget
Computing Center
Finance and Administration
Financial Aid
Human Resources
Internal Control
Mail Services
New Student & Transitions Office
Payroll
Property Control
Purchasing
Student Affairs
University Services

12 McEwen Hall
Communication
Fredonia Radio Systems

13 Jewett Hall

14 Mason Hall
School of Music

15 Juliet J. Rosch Recital Hall

16 Robert and Marilyn Maytum Music Rehearsal Halls

17 King Concert Hall

18 Michael C. Rockefeller Arts Center
Theatre and Dance
Visual Arts and New Media

19 Dods Hall
Athletics and Recreation

20 Steele Hall

21 Natatorium

22 Williams Center
Blue Devil Den
Blue Lounge
Campus Life Office
Credit Union
Horizon Room
Intercultural Center
Ticket Office
Welcome Center and Campus Tours
Willy C's Dining

23 University Commons
Bookstore
Convenience Store
Cranston Marché
Starbucks Coffee

24 LoGrasso Hall
Counseling Center
Health Center

26 Campus and Community Children's Center

27 University Stadium

28 Park and Ride

30 Services Complex
Central Receiving
Facilities Services
FSA Commissary
Garage
Grounds
Maintenance Vehicles

31 Lake Shore Savings Clock Tower and Carillon

RESIDENTIAL

25 Erie Hall

32 Nixon Hall Residence

33 Chautauqua Hall Residence

34 McGinnies Hall Residence

35 University Commons Residence

36 Alumni Hall Residence

37 Gregory Hall Residence
Career Development
Faculty Student Association
Marketing and Communications
Residence Life
University Police

38 Kasling Hall Residence

39 Grissom Hall Residence

40 Kirkland Complex Residence

41 Disney Hall Residence

42 Eisenhower Hall Residence

43 Schulz Hall Residence

44 Hemingway Hall Residence

45 Andrews Complex Residence

46 Hendrix Hall Residence
WNYF-TV
Environmental Health and Safety and Sustainability
Facilities Planning

47 Igoe Hall Residence
Photography Lab

48 Village Center

49 Pioneer Residence

50 Zoar Residence

51 Barcelona Residence

52 Holland Residence

53 Niagara Residence

54 Letchworth Residence

55 University Village Residence

Williams Center

IBAC Wifi login credentials:

User id: FREDbound
Password: bloomingfred

Please note you will be connected to eduroam seamlessly if you are from an eduroam-enabled campus.

Around the Area:

Hotel and Transportation Information

Clarion Hotel Conference Center on Lake Erie:

Address: 30 Lake Shore Drive East, Dunkirk, NY, 14048, US
Phone: 716-366-8350 or 1-800-525-8350

Clarion Hotel & Conference Center in Dunkirk offers wonderful views overlooking Lake Erie. Located approximately 24 miles from the Jamestown airport, and 45 miles from the Buffalo airport, the hotel & conference center is conveniently located for your getaway, special event or business meeting. The harbor-front boardwalk and the center of Dunkirk are a short walk away and offer dining, recreation and entertainment year-round. On-site, the hotel features a choice of lakeview rooms, city-side rooms, or suites with a whirlpool. To suit our guests' varied needs, this hotel offers room service, a guest laundry area, free newspapers, a 24-hour front desk, complimentary parking and in-room safes. Hotel guests are afforded an abundance of amenities, like free hot breakfast bar, free high-speed Internet access, free local calls and free coffee. We have a seasonal heated outdoor pool and exercise room with cardio equipment and universal weight machine. Traveling through Buffalo? Visit our sister hotel, the Quality Inn - Buffalo Airport, featuring 107 guest rooms, WI-FI internet, fitness room and special Park & Fly Rates!

Steelbound Brewery & Distillery:

Address: 30 Lake Shore Drive East, Dunkirk, NY, 14048, US
Phone: 716-366-7701

Bus Transportation:

A special bus will be running between Hotel Clarion and the Fredonia Campus.

Day	Date	From Hotel to Campus	From Campus to Hotel
Thursday	May 8th, 2025	7:45 A.M., 8:15 A.M., 12:00 P.M.12:30 P.M.	4:30 P.M., 5:00 P.M.
Friday	May 9th, 2025	7:45 A.M., 8:15 A.M.	2:00 P.M., 2:30 P.M.

Please check with the front desk manager at the Clarion Hotel for rides and more information.

Phone a friend for help during your stay: Kaustav Misra (662-312-0005 or misra@fredonia.edu) or Justin Mindzak (justin.mindzak@fredonia.edu)

Conference Itinerary

Thursday, May 8th		
8:00 a.m. - 12:00 p.m.	Registration & Information	MPR, Williams Center
8:00 a.m. - 9:00 a.m.	General Breakfast & Conference Inauguration Ceremony: President Kolison and Interim Provost Horowitz	MPR, WC
8:30 a.m. - 8:40 a.m.	Plenary Session: Greetings from President Stephen Kolison	MPR, WC
8:40 a.m. - 8:50 a.m.	Plenary Session: Greetings from Interim Provost Judith Horowitz	MPR, WC
8:50 a.m. – 9:20 a.m.	Plenary Session: Ryan Rosenberg, Director of Data Analytics, Fastenal	MPR, WC
9:30 a.m. - 10:50 a.m.	**Concurrent Sessions-I**	Williams Center
	Track 1: Accounting and Election Analytics	WC S204A
	Track 2: Industry Insights	WC S204B
	Track 3: Sports Analytics	WC S204C
	Track 4: Emerging Scholars I	WC S204D
10:50 a.m. - 11:00 a.m.	Coffee Break	MPR, WC
11:00 a.m. - 12:20 p.m.	**Concurrent Sessions-II**	Williams Center
	Track 5: Healthcare Analytics	WC S204A
	Track 6: Supply Chain and Operations	WC S204B
	Track 7: Emerging Scholars II	WC S204C
11:00 a.m. – 12:20 p.m.	Undergraduate Posters: Judging time	MPR Ring, WC
12:20 p.m. - 1:45 p.m.	Lunch	MPR, WC
1:00 p.m. - 1:45 p.m.	Keynote Speaker 1: *Building Capacity for AI and Organizational Upskilling* - Susan Morrissey	MPR, WC
1:45 p.m. – 2:45 p.m.	Industry Panel Discussion: Zubair, CIE, Wells, & Solar Designer	MPR, WC
1:00 p.m. - 4:00 p.m.	Analytics Career Fair	Blue Lounge, WC
2:50 p.m. – 4:10 p.m.	**Concurrent Sessions-III**	Williams Center
	Track 8: Analytics in Business Education	WC S204A
	Track 9: Applied Economics	WC S204B
	Track 10: Human Resources	WC S204C
	Track 11: Emerging Scholars III	WC S204D
4:10 p.m. - 4:20 p.m.	Coffee Break	MPR, WC
4:20 p.m.- 5:00 p.m.	Fireside Chat: *Keeping up with the Copilots* -Scott Root, Microsoft	MPR, WC
5:00 p.m. - 5:30 p.m.	**Depart from MPR to Clarion Hotel & Break**	
5:30 p.m. - 6:30 p.m.	**Registration**	Clarion Hotel, Dunkirk
5:30 p.m. - 6:15 p.m.	Reception and Networking with Smooth Jazz by Music Industry Band	Clarion Hotel, Dunkirk
6:15 p.m. - 7:15 p.m.	Gala Dinner	Clarion Hotel, Dunkirk
6:45 p.m. - 7:45 p.m.	Keynote Speaker 2: *Unlocking Advanced Data Insights with Conversational AI* - Arina (Vlasova) Curtis, CEO DataGPT	Clarion Hotel, Dunkirk
Friday, May 9th		
8:00 a.m. - 9:30 a.m.	Registration & Breakfast	MPR, WC
8:30 a.m. - 9:15 a.m.	Industry Panel Discussion: Wells, Rich, & Fastenal	MPR, WC
9:30 a.m. - 10:50 a.m.	**Concurrent Sessions-IV**	Williams Center
	Track 12: Advanced Business Analytics	WC S204A
	Track 13: Finance, Marketing and Retail Analytics	WC S204B

	Track 14: General Analytics	WC G103A
	Track 15: Emerging Scholars IV	WC G103B
10:50 a.m. - 11:00 a.m.	Coffee Break	MPR
11:00 a.m. - 12:00 p.m.	Workshop: *Using AI to Go Beyond Textbooks* - Savannah Ross, Breakout Learning	MPR, WC
11:00 a.m. - 12:00 p.m.	Undergraduate Posters: Judging time	MPR Ring, WC
12:00 p.m. - 1:30 p.m.	Lunch	MPR, WC
12:30 p.m. - 1:30 p.m.	Fireside Chat with Dr. Ernest Fokoue	MPR, WC
1:30 p.m. - 2:00 p.m.	Award Distribution and Concluding Remarks by Kaustav Misra	MPR, WC
2:30 p.m.	**Depart from Campus!**	

***** MPR - Multipurpose Room, WC - Williams Center *****

General Information

Conference Registration:

Registration will be held in the Multipurpose Room (MPR) of the Williams Center, starting each day at 8:00am.

Badges:

All conference registrants will receive a personalized badge when they check in at the registration desk. Please wear your badge at all times since they will be checked at all sessions, meal functions and events. If you misplace your badge, please come to the registration desk for a replacement.

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Special Assistance:

Accessible Entrances Map

SUNY Fredonia is committed to making its entire campus accessible to all individuals, including those with disabilities. For further information regarding special needs, or if you have previously requested assistance for this conference, please visit the registration desk.

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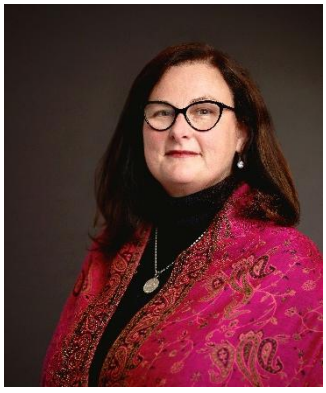
Featured Speakers

Thursday, May 8, 2025: Breakfast Keynote Speaker – The Evolution of Analytics within an Organization by Ryan Rosenberg, Director of Data Analytics, Fastenal

Ryan Rosenberg is a seasoned analytics leader with over two decades of experience in roles focused on advancing data-driven decision-making throughout the Fastenal organization; a global supply chain leader primarily engaged with the manufacturing industry. From business process change initiatives to performance improvement programs, go to market strategy shifts, and adoption of modern data analytics architecture, he has been on hand for the evolution of analytics across the organization.

Thursday, May 8, 2025: Lunch Keynote Speaker – Building Capacity for AI and Organizational Upskilling by Susan Morrissey, Instructional Leadership Coach, Boston College



Prior to joining the Roche Center for Catholic Education at Boston College in January 2023, Susan served for over 27 years as an educational leader in PK-12 Catholic and independent schools in New England and Northern California. Her work includes roles teaching middle and high school English and Social Studies, and she has served as principal/head of school for both Catholic and independent schools, and as the Associate Superintendent of Catholic Schools for Curriculum and Instruction for the Diocese of Providence. Susan worked as Senior Director of Academic Support for the Cambridge Institute of International Education, where she built and managed academic programs in 107 schools across the United States. In addition to her passion for coaching leaders and teachers, Susan is a student of coming trends including school redesign and emerging artificial intelligence in schools, and is licensed as a Superintendent/Assistant Superintendent in Massachusetts. Her expertise in AI and education has led to national and regional speaking engagements, policy work with The Center for AI and Digital Policy, and contributions to publications and podcasts exploring the intersection of human intelligence and technological innovation in educational and leadership settings.

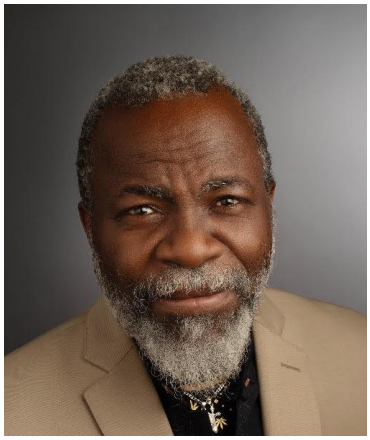
Thursday, May 8, 2025: Fireside Chat Speaker – Keeping up with the Copilots by Scott Root, Principal Cloud Solution Architect, Microsoft

Scott Root is a Principal Cloud Solution Architect specializing in App Innovation with Artificial Intelligence at Microsoft. Scott designs scalable, secure applications that enhance business performance and drive digital transformation. His expertise in AI integration has led to significant advancements in automation and data-driven decision-making.

Thursday May 8, 2025: Dinner Keynote Speaker - Arina (Vlasova) Curtis, CEO DataGPT

Arina (Vlasova) Curtis has always used data analytics to develop practical business solutions. At PwC, she managed significant projects for major corporations across many sectors, such as energy, media & entertainment, banking, and telecommunications. Her roles included overseeing post-merger integrations, consolidating digital assets, developing long-term investment plans, implementing visualization dashboards, and driving digital strategies. At US Mobile she built and led a customer success framework, managing a team of over 150. Arina earned her BSc in Economics at Lomonosov Moscow State University on a full scholarship, and an MSc from the London School of Economics. She has also written extensively, including research into dynamic pricing techniques, culminating in her book "Economic power of e-retailers via price discrimination in e-commerce" and several other notable publications. Currently, as the CEO of DataGPT, Arina is focused on strategic go-to-market approaches, establishing key partnerships, and enhancing brand visibility. Her leadership at DataGPT highlights her unique ability to blend advanced technology with solid business strategy.

Friday, May 9, 2025: Luncheon Keynote Speaker - Ernest Fokoue, PhD Professor, School of Math and Stat, Founder and Director of Data Science Research Group, RIT



Ernest Fokoue has an innate passion for mathematical sciences but also treasures philosophy and greatly enjoys. Exploring ideas that reconcile hard and soft sciences. He earned his doctoral degree from the university of Glasgow in Scotland (United Kingdom), and is currently a professor in the school of mathematics and statistics at Rochester Institute of Technology where His specializes is Statistical Machine Learning and Statistical Learning Theory. He is the proud and grateful father of his 20 year old daughter Ellie (University of Notre Dame) and author of the springer textbook "Principles and Theory for Data Mining and Machine Learning.

Friday, May 9, 2025: Workshop Facilitator - Savannah Ross, Senior Account Executive, Breakout Learning

Savannah Ross is a Senior Account Executive at Breakout Learning, where she specializes in educating and building relationships with academic professionals. Passionate about transforming education, Savannah focuses on bringing discussions back to the center of learning, creating memorable experiences for students, and simplifying professors' lives with Breakout's patented AI technology. At Breakout, Savannah aims to make a meaningful impact in education and prepare students for the workforce. Outside of work, she enjoys exploring nature, golfing, experimenting in the kitchen, cheering on her favorite team (Go Irish!), and traveling to experience new cultures and ideas.

Plenary Sessions: Panel Discussions, Fireside Chat and Roundtable

Industry Panel Discussion - I

Thursday, May 8th, 2025 from 1:45pm to 2:45pm
Title: Leveraging Data Analytics for Smarter Decision Making
Student Moderator: Matthew Brown
Panelists: *Junaid A Zubairi* – Founder, Zubair, *Nick Koziol* – Business Engagement and Communications Manager, Center of Excellence in Data Science and Artificial Intelligence, Kim Baldridge, Senior Manager, Process Improvement – Wells, *Ben Luce* – Director of Technical Design, Advocacy, & Outreach at Buffalo Solar Solutions, Inc.

Industry Panel Discussion - II

Friday, May 8th, 2025 from 8:30am to 9:15am
Title: Analytics at Work: Guiding Better Business Decisions
Student Moderator: Gabrielle Sordetto
Panelists: *Rick Reichard*, Plant Controller – Wells, *Geanne Zanatta* – Rich, *Ryan Rosenberg* – Fastenal

Workshop

Friday, May 9th, 2025 from 11:00am to 12:00am
Title: Using AI to Go Beyond Textbooks
Facilitator: Savannah Ross, Breakout Learning

At **Breakout Learning**, we believe meaningful conversation is the heart of true education — and it's been missing for too long. As classrooms grew, thoughtful discussions gave way to textbooks and tests. Now, in a world overflowing with information, the need isn't to memorize facts — it's to think critically. We're using AI to bring dialogue and debate back to learning. Our content sparks small-group discussions, guided and graded by AI, giving professors fresh insights and students a deeper, more engaging educational experience.

It's time to revive conversation — and reshape education together.

Fireside Chat by Dr. Ernest Fokoue

Saturday, May 4th, 2024 from 11:00am to 12:30pm
Title: Rediscovering the Quintessential Building Blocks of Effective Statistical Data Analysis
The gist of this, or rather the spirit, is to provide the audience with a mini tour of some of the ubiquitous methods and techniques along with practices that have remained at the core of analytics, despite the thunder/barrage of fancy extensions parading as better.

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Adding value

BS&P is proud to sponsor the 2025 International Business Analytics Conference at SUNY Fredonia! We're committed to fostering growth and learning through our Leadership program, internships, and shadowing opportunities—bringing fresh perspectives to the table. Adding value to businesses, employees, and our community isn't just what we do—it's who we are.

Scan here to learn more about the opportunities that await you at BS&P!

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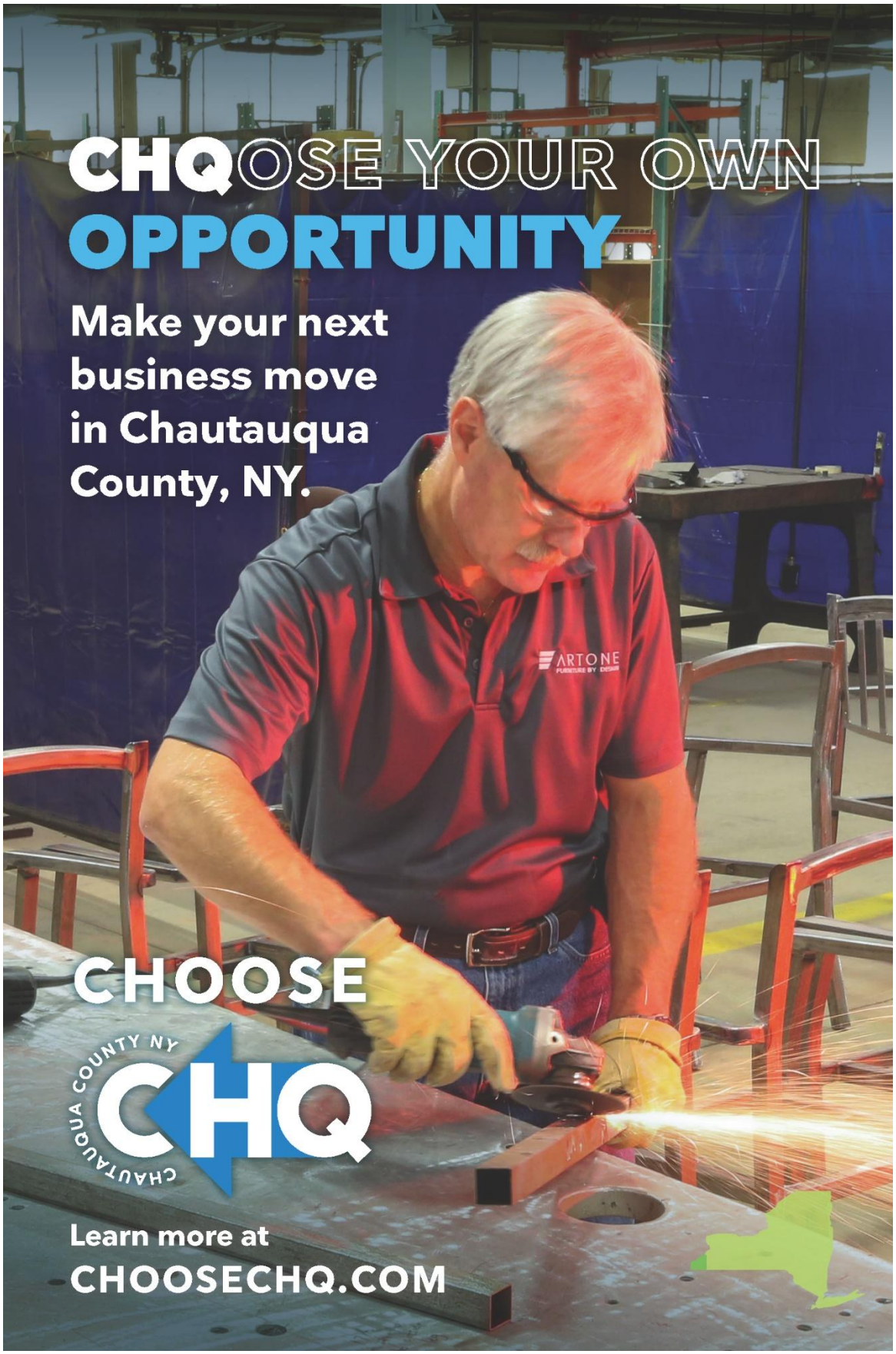
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Conference Tracks

Concurrent Sessions I (Thursday - 9:30am) Tracks 1-4

Track 1: Accounting and Election Analytics

Room: WC S204A (9:30 am - 10:50 am)
Moderator: Abdelghani Mehailia *(Yorkville University)*

1.1 Bridging the Skills Gap: Integrating Data Analytics and Artificial Intelligence into Accounting Education

Authors: Nazik Roufaiel *(SUNY-ESC Center for Distance Learning)*
Magdy Roufaiel *(SUNY-ESC-CDL-MBA)*

As the role of data analytics in business continues to expand, the accounting profession must adapt to meet the evolving demands of both industry and regulatory bodies. This paper explores the crucial role of data analytics in accounting, focusing on its application in business decision-making and its increasing importance in the education and licensure of Certified Public Accountants (CPAs). Despite the industry's growing reliance on data-driven insights, a significant gap remains between the skills demanded by employers and those possessed by recent accounting graduates.

This presentation will examine the benefits of integrating data analytics into accounting curricula, highlighting the competencies required for modern CPAs to thrive in the industry. The author will review current trends in business analytics, providing insights into how these tools are applied in practice, from predictive financial modeling to real-time fraud detection. Additionally, statistics will illustrate the widening divide between academic preparation and industry expectations, highlighting data from recent employer surveys. For instance, a recent report revealed that over 70% of accounting firms prioritize data analytics skills, yet less than 40% of business and accounting graduates feel proficient in this area.

The session will also offer recommendations for aligning academic programs with industry needs, ensuring that students and future professionals are equipped with the analytical skills required for licensure and beyond. Attendees will leave with actionable strategies to bridge this skills gap, ultimately enhancing both education and professional practice.

1.2 Detecting Anomalous Trading Patterns in the Cryptocurrency Market Using Graph Neural Network

Author: So-Jin Yu *(SUNY Fredonia)*

This study examines how to detect anomalous trading patterns in the cryptocurrency market using Graph Neural Network (GNN), which is an emerging technique compared to traditional machine learning. Two anomalous trades, wash trading and pump-and-dump, frequently or systematically take place, damaging investors' trust. Further, such a complex trading structure makes it difficult for market participants to detect manipulative trading patterns. By comparing GNN to traditional machine learning, this study examines whether GNN offers advantages in detecting wash trading and/or pump-and-dump. If so, it also investigates whether GNN can improve the reliability of

valuation models for cryptocurrency assets. This study provides practical implications to better protect investors from manipulation, and to improve the credibility of the cryptocurrency market.

1.3 Filling in the Blanks - Estimating Vote Choice of Undecided Voters

Travis Brodbeck *(SUNY Albany, USA & Siena College)*

In pre-election surveys, pollsters are challenged by respondents who refuse to answer a question or say they ""don't know"". Rather than discarding this response, pollsters typically include this respondent and report out on findings despite their unknown potential voting behavior. Poll results are generally reported in this fashion, for example with 46% supporting candidate A, 48% supporting candidate B, and 6% of respondents saying they don't know or have not made up their mind yet. On election day when actual results come in, these voters either make up their mind and skip the ballot box altogether and then pollsters are evaluated against their polls composed of some number of undecided or private voters. This challenge impacts how the media frames the story, how the public interprets polls, and campaign decision making. Using other questions besides the generic horserace ballot question, can pollsters provide additional insights and more nuanced snapshots of the race when surveys contain undecided voters?

In an analysis of interviews conducted by the New York Times/Siena College poll during the 2024 pre-election season, this paper provides insights on creating vote choice estimates for undecided voters. The data demonstrates that a combination of demographic and issue questions were most effective in creating estimates for undecided voters that more accurately reflect actual election results compared to the originally published survey results. Findings from this research can be applied retroactively to older survey data and future election cycles to enhance public understanding of the electorate.

Track 2: Industry Insights

Room: WC S204B (9:30 am - 10:50 am)
Moderator: Shazad Mohammed *(State University of New York at Fredonia)*

2.1 An Empirical Analysis of the Nexus Among Inclusive Leadership, Team Members' Psychological Factors and Project Performance

Author: Muhammad Yousuf Khan *(Pakistan Agricultural Research Council)*

Leadership role in project success is irrefutable yet the most appropriate leadership style is open to debate, which triggers the need for examining different leadership styles that effectively lead the team and attain greater project performance (PP). Relevant literature prescribes that the influence of inclusive leadership (IL) and project team members' psychological factors should be reviewed in combination to provide a much clearer understanding of the predictors of PP. This research aims to examine the effect of IL on PP together with parallel mediational roles of psychological empowerment (PE) and work meaningfulness (WM) between these relationships. Using structural equation modeling (SEM) analysis technique, research hypotheses were tested with a sample of 249 respondents working in different social sector projects in Pakistan. The study's results suggest that IL, besides having a positive direct effect on PP also positively impacts project team members' PE and WM. In addition, perceived PE and WM significantly mediate the link between IL and PP. The results broaden our understanding of underlying direct and indirect paths and detailed mechanisms from IL and team members' psychological factors to PP. Implications, limitations, and avenues for future research are provided.

2.2 Transforming Project Management Through Data Analytics and Generative AI

Authors: Srikanth Srinivasa *(Northwood University & Harvard Business School)*
Itauma Itauma *(Northwood University)*

The integration of Artificial Intelligence (AI) and Machine Learning (ML) is reshaping the landscape of project management, offering transformative opportunities to enhance efficiency, decision-making, and outcomes. This presentation examines the intersection of data analytics and AI in project management practices, focusing on how generative AI can revolutionize project planning, resource allocation, stakeholder communication, and performance measurement. By leveraging cutting-edge AI technologies, project managers can automate repetitive tasks, mitigate risks, and optimize workflows to drive success.

Through a combination of academic research and real-world applications, this session highlights practical strategies for adopting AI in project management. Case studies will demonstrate the tangible benefits of AI-driven tools in improving key performance indicators such as error reduction, time savings, cost optimization, and risk mitigation. The importance of effective prompt engineering for maximizing generative AI's potential will be emphasized, along with step-by-step guidance to craft actionable prompts.

The presentation also addresses ethical considerations and challenges associated with AI, focusing on ensuring transparency, fairness, and reducing bias in data-driven decision-making. Attendees will gain insights into state-of-the-art AI tools for real-time tracking, risk analysis, and performance reporting, enabling them to harness data analytics to transform project management practices.

Key Takeaways:

- Understanding AI Tools: Gain familiarity with AI technologies that assist project managers in real-time tracking, risk analysis, and performance reporting.
- Practical Techniques: Learn effective prompt engineering strategies to maximize the benefits of generative AI.
- Real-World Use Cases: Discover specific scenarios where generative AI optimizes project processes and performance measurement.
- Ethical AI Practices: Understand the importance of ethical considerations in leveraging AI for business and project management.

This session is designed for a global audience of professionals, academicians, and students, bridging research and practice to showcase actionable knowledge and demonstrable examples of AI's profound impact on project management and business analytics.

2.3 Transforming Business Data into Stunning Visualizations

Author: Lisa Jo Romas-Elliott *(Pennsylvania State University)*

Transforming business data into compelling visual representations is a significant aspect of data analytics. A primary challenge lies in taking crucial business data, extracting its essential information, and conveying it to stakeholders in a significant manner. While tools such as Excel, Tableau, and Alteryx may appear to simplify this process, the reality is more complex. There are numerous steps involved in converting raw data into meaningful graphics that may not be apparent to the casual observer. This presentation will cover the processes of data cleaning for visualization, converting data

into a suitable visualization format, and choosing the appropriate visualization tool, alongside essential visualization heuristics.

Track 3: Sports Analytics

Room: WC S204C (9:30 am - 10:50 am)
Moderator: Soumik Banerjee *(Canisius University)*

3.1 Enhancing College Football Playoff Rankings: a Stochastic Multicriteria Acceptability Analysis Approach

Author: David Mahalak *(University of Scranton)*

The National Collegiate Athletic Association (NCAA) College Football Playoff (CFP) series is one of the most anticipated events of the year. The revenue that is generated from these games is staggering, with participating teams and conferences making millions of dollars.

The current CFP selection process involves a 22-member selection committee that ranks teams based on qualitative and quantitative criteria, such as strength of schedule, head-to-head competition, and comparative outcomes against common opponents.

With so many financial implications, it is critical that the CFP selection process maintain fairness and transparency in its evaluations of team rankings to protect the overall integrity of college football's championship. However, the selection process is often criticized for its biases, vagueness, and questionable decisions. For instance, many analysts and fans did not feel that Southern Methodist University desired a playoff spot in the 2025 CFP bracket, over other teams that played a more competitive schedule, e.g. the University of Alabama or Miami.

To address the inherent flaws of the current CFP selection process, this study will employ Stochastic Multicriteria Acceptability Analysis (SMAA) to enhance transparency and fairness of the CFP ranking process. Using this novel methodology, we will be able to combine qualitative and quantitative metrics and consider multiple weighting scenarios to improve the NCAA playoff selection process. The implementation of the SMAA-based ranking system will enhance competitive fairness and overall product integrity. Furthermore, this research will contribute to the field of sports analytics and decision science.

3.2 Unveiling Esports Trends 2010 - 2024

Authors: Reneta Barneva *(SUNY Fredonia)*
Lisa M Walters *(The State University of New York Fredonia)*

Esports is an important sector within the broader sport industry, characterized by competitive video gaming at a professional level, either individually or in teams and is often watched online or in person. It is projected to bring about 4 billion in revenue in 2024, mostly from sponsorships, media rights, merchandise, and ticket sales.

This work explores the dynamic nature of esports, highlighting its swift evolution driven by technological advancements, consumer preferences, and social media influence. More specifically, we explore the dataset ""Gaming Trends 2024,"" which delves into the key trends shaping the current gaming landscape, since esports are directly connected to the video gaming industry. By analyzing data on preferred platforms, active user numbers, new registrations, average session durations, in-

game purchases, social media mentions, stream viewership, revenue, and top genres, we provide a comprehensive overview of the state of gaming from 2010 to 2024.

We also use predictive modeling to forecast future gaming trends, providing substantial insight for developers, marketers, and stakeholders. Our findings seek to help these professionals make better decisions in informed ways in order to capitalize on emerging trends and opportunities within the esports and gaming industries.

Track 4: Emerging Scholars I: AI & Natural Language Applications in Business & Cybersecurity

Room: WC S204D (9:30 am - 10:50 am)
Moderator: Megan Johnson *(State University of New York at Fredonia)*

4.1 Digital Human Avatars with Agentic AI Integration: Evaluating Effectiveness in Hybrid Business Communication Environments

Authors: Mohammad Nasim (Northwood University & State of Rhode Island)
Shanshan Zhu (Mount Holyoke College)

Hybrid environments create substantial obstacles for modern business communication specifically in retaining information, maintaining engagement quality, and ensuring workflow continuity. This research presents a new method that combines AI-generated digital human avatars with automated workflow systems that utilize agent technology to solve identified business communication challenges. The research establishes and tests an all-encompassing system that enables virtual business representatives to communicate within structured settings with human users while intelligent AI mechanisms record and transform their dialogue results into action plans. Using voice and facial cloning technology from HeyGen this custom system builds lifelike digital models of business staff which work together with Zoom videoconferencing functionalities and natural language processing tools for conversation assessment along with Zapier-based workflow automation to manage multi-step data processing. The research focuses on a scenario where automated digital avatars representing sales managers lead formal interviews with team members and handle documentation and follow-up activities automatically. The study evaluates three key dimensions: The research evaluates engagement quality and conversational naturalness between humans and digital avatars as well as information retention and process continuity compared to standard meetings and ethical factors including privacy concerns and algorithmic bias. The performance evaluation features quantitative metrics for interaction quality and information accuracy assessments as well as process completion rates together with qualitative participant feedback. Initial findings show that this approach produces major advantages through uniform communication methods and enhanced memory retention along with a reduced burden for management within business communication systems. The research advances our understanding of human-AI partnerships in business settings by offering practical frameworks which help organizations improve digital avatar-based communication through agentic AI systems.

4.2 Analytical Applications of Natural Language Processing (NLP) in Cyber Threat Intelligence

Authors: Robert G Cutlip *(Fairmont State University)*
Rebecca Giorcelli *(Fairmont State University)*
Yeabsira M Dana *(Fairmont State University)*
Teame Gidena Hiben *(Fairmont State University)*
Getachew Hailu Kinfu *(Fairmont State University)*

Gebrehiwot Tadesse Gebremariam *(Fairmont State University)*

Natural Language Processing (NLP) has revolutionized the analysis of textual data, enabling machines to extract actionable insights from human language. This paper explores the intersection of NLP and Cyber Threat Intelligence (CTI), highlighting analytical methods that enhance threat detection and mitigation strategies. Core NLP techniques such as Sentiment Analysis, Latent Semantic Indexing (LSI), Singular Value Decomposition (SVD), and Latent Dirichlet Allocation (LDA) are discussed, emphasizing their applications in identifying emerging threats, understanding adversarial patterns, and improving situational awareness in cybersecurity.

Sentiment Analysis, particularly P-N Polarity and S-O Polarity, offers insights into threat actors' intent by classifying texts as positive, negative, or neutral and distinguishing subjective opinions from objective facts. Deep learning models like LSTMs and transformers, including BERT, significantly advance the precision of such classifications. Techniques like tokenization, stemming, and lemmatization form the foundational preprocessing steps, ensuring accurate representation of textual data.

Advanced methodologies such as LSI and SVD uncover latent patterns in threat intelligence datasets, improving the detection of hidden associations and thematic clustering. LDA, a probabilistic generative model, facilitates topic extraction from cyber threat reports, enabling the identification of prevalent attack trends and vectors. The comparison of supervised and unsupervised learning models underlines the trade-offs between accuracy and the requirement for labeled data in cybersecurity applications.

This synthesis underscores the critical role of NLP in fortifying cybersecurity frameworks by transforming textual data into actionable intelligence, paving the way for proactive and informed decision making in threat management.

4.3 Enhancing Cyber Threat Intelligence Through Advanced Phishing Detection and Prevention Technologies

Authors: Robert G Cutlip *(Fairmont State University)*
Rebecca Giorcelli *(Fairmont State University)*
Getachew Hailu Kinfu *(Fairmont State University)*
Gebrehiwot Tadesse Gebremariam *(Fairmont State University)*
Teame Gidena Hiben *(Fairmont State University)*
Yeabsira M Dana *(Fairmont State University)*

Phishing remains one of the most prevalent and damaging forms of cyber threats, exploiting human vulnerabilities through social engineering tactics to achieve financial gain or data theft. This paper explores the analytical methods employed in detecting phishing attacks and their implications for Cyber Threat Intelligence (CTI). We delineate the four critical stages of a phishing attack: bait, hook, catch, and exploitation, emphasizing how cybercriminals manipulate emotions to deceive victims into divulging sensitive information. To combat these threats, we highlight the significant advancements in Machine Learning (ML), Natural Language Processing (NLP), and specifically Large Language Models (LLMs) that are revolutionizing phishing detection and prevention. These technologies enable the analysis of vast datasets to identify patterns indicative of phishing attempts, offering real-time detection capabilities that traditional methods lack. We discuss specific algorithms such as neural networks, and deep learning models that have shown promise in enhancing the accuracy of phishing identification. The integration of these advanced detection techniques into Cyber Threat Intelligence framework allows organizations to proactively monitor and respond to phishing threats. By utilizing ML and NLP, CTI can evolve from reactive measures to predictive analytics, thereby improving overall cybersecurity posture. This paper emphasizes the necessity for organizations to adopt these

technologies to safeguard sensitive information and mitigate risks associated with phishing attacks.

4.4 Revolutionizing Recruitment: Enhanced Machine Learning Models for Bias Mitigation and Efficiency

Authors: Mukhesh Ravi *(Northwood University)*
Harika Yenuga *(Northwood University)*
Itauma Itauma *(Northwood University)*

This study investigates the application of machine learning models to optimize recruitment processes by predicting hiring decisions based on comprehensive candidate profiles. Utilizing a dataset of 1,500 candidates, the research incorporates diverse features such as age, gender, education level, work experience, skill scores, social media activity, and psychometric assessments. Several machine learning algorithms, including Random Forest, Support Vector Machine, Logistic Regression, and advanced ensemble methods (CatBoost, XGBoost), were evaluated to determine the best-performing model and identify the most influential features. Results indicate that CatBoost outperformed other models, achieving an accuracy of 95%, followed by Random Forest and XGBoost. Analysis of feature importance revealed that Recruitment Strategy, Education Level, and Personality Score were the top three factors influencing hiring decisions.

This study extends existing research by implementing deep learning techniques and fairness-aware algorithms to mitigate biases in hiring decisions. Specific bias detection and correction methods, alongside fairness metrics such as demographic parity and equal opportunity, were employed to ensure equitable hiring practices. Explainable AI methods, including SHAP and LIME, were incorporated to enhance model interpretability, providing HR professionals with actionable insights. The research also addresses challenges such as bias in hiring and inefficiencies in recruitment by integrating ethical guidelines and data privacy measures to ensure transparency and accountability in AI-driven recruitment processes.

The findings demonstrate the potential of machine learning to improve recruitment efficiency, reduce biases, and promote fairer hiring outcomes. By leveraging advanced algorithms, this study highlights the real-world impact of AI in enhancing recruitment processes, offering benefits such as increased efficiency, cost reduction, and greater fairness in candidate selection.

Concurrent Sessions II (Thursday – 11:00am) Tracks 5-7

Track 5: Healthcare Analytics

Room: WC S204A (11:00 am - 12:20 pm)
Moderator: Shazad Mohammed *(State University of New York at Fredonia)*

5.1 Analyzing Hemoglobin A1C Impact on Diabetes Care Outcomes: a Machine Learning Approach and Comprehensive Analysis of Electronic Health Records

Author: Soumik Banerjee *(Canisius University)*

Diabetes is a global endemic with rapidly increasing prevalence in both developing and developed countries. The American Diabetes Association has recommended glycated hemoglobin (HbA1c) as a possible substitute to fasting blood glucose for diagnosis of diabetes. HbA1c is an important indicator of long-term glycemic control with the ability to reflect the cumulative glycemic history of the preceding two to three months. Alongside diabetes, chronic conditions occur and can impact a patient's death which is called comorbidities. This research analyses over 100,000 hospital records to

assess the relationship between comorbidities and hospital readmission rates among diabetic patients, with health records extracted from the Cerner Health Facts Database. Multivariate logistic regression, and an array of machine learning techniques were used to fit the relationship between patient comorbidities and early hospital readmission to compare the impact of significant covariates on model performance.

Previous researchers observed that the measurement of HbA1c during patient encounters is associated with a lower rate of readmission among patients with a primary diagnosis of diabetes, compared to circulatory or respiratory diseases (Strack et al., 2014). The aim of the presented analysis is to extend these findings by investigating the interaction of high-risk comorbidities on HbA1C levels and 30-day hospital readmissions.

5.2 From Data to Decisions: AI-Powered Predictive Analytics in Breast Cancer Risk and Treatment Optimization

Authors: Mohammadhossein Amini *(Washington University in St. Louis & Olin Business School)*
Zihang Shi *(Washington University in St. Louis)*
Arefeh Esmaeilpour *(Washington University in St. Louis)*

The FDA Adverse Event Reporting System (FAERS) serves as a valuable resource of real-world data on drug safety, adverse reactions, and patient outcomes, offering vital insights for healthcare analytics. This study utilizes FAERS data to develop an AI-driven predictive model that assesses patient outcomes and risk factors, specifically in breast cancer treatment. Traditional methods for risk assessment often depend on clinical trials and retrospective studies, which may not effectively capture the complexities of real-world scenarios. In contrast, applying AI and machine learning techniques to FAERS data allows for the identification of patterns, prediction of adverse events, and optimization of patient management strategies. Our model predicts the likelihood of severe outcomes by integrating FAERS-reported adverse events with factors such as patient demographics and treatment regimens. Advanced algorithms, including natural language processing (NLP), enable us to extract insights from unstructured FAERS reports, enhancing early risk detection. The model's real-time risk stratification facilitates better treatment plans for healthcare providers and pharmaceutical companies, improving patient safety and reducing costs. The findings underscore the transformative potential of FAERS-based predictive analytics in refining breast cancer treatment strategies. Future developments may include expanding AI capabilities to create recommender engines that offer alternative therapies, thereby further minimizing associated risks for patients. This research highlights AI's vital role in enhancing predictive analytics for patient care in breast cancer and beyond

5.3 Financial Health vs. Care Quality in Skilled Nursing Facilities: Assessing the Impact of COVID-19

Authors: Ai Ren *(SUNY New Paltz)*
Pavlo Mysak *(SUNY New Paltz)*
Svetlana Doronkina *(SUNY New Paltz)*
Qi Li (*SUNY New Paltz)*

The COVID-19 pandemic placed unprecedented financial and operational strain on skilled nursing facilities (SNFs) in the United States, exacerbating long-standing challenges in healthcare funding and quality of care. This study examines the relationship between financial health and care quality in SNFs, with a particular focus on the impact of COVID-19. Our findings reveal that better financial

health correlates with higher quality ratings, while increased reliance on Medicaid funding is associated with lower operating margins. For-profit facilities demonstrate higher profitability, often at the expense of staffing levels. However, facilities with a higher number of COVID-19 cases experienced increased operating margins. These insights highlight the fragile balance between financial stability and care quality in the SNF sector and underscore the need for policy interventions to ensure equitable and sustainable long-term care.

Track 6: Supply Chain and Operations

Room: WC S204B (11:00 am - 12:20 pm)
Moderator: Joseph Porter, Jr *(Nazareth University, USA)*

6.1 Exploring the Role of Generative AI in Enhancing Supply Chain Integration

Authors: Abdullah Oguz and Hassan A. Ahmed *(Cleveland State University)*
Carlo Gabriel Porto Bellini *(Universidade Federal da Paraíba (UFPB))*

This study investigates the potential for the transformative potential of generative artificial intelligence (GenAI) as a supply chain integration (SCI) enabler. Taking the legacy of ICTs and current progress in AI use in supply chain management, this paper highlights the strategic use of GenAI for real-time data sharing, collaborative decision-making, and risk mitigation. Businesses can address inefficiencies and improve supply chain resilience using GenAI's natural language, predictive analytics, and scenario modeling tools.

This research defines the opportunities and challenges based on the existing literature on cultural enablers, technology adoption models, and supply chain AI integration challenges. Cultural, technological, and organizational integration is the key to GenAI deployment. This research underscores the need for data-driven culture, employee training, and inter-organizational cooperation to unleash GenAI's potential fully.

While conceptual in nature, this study opens the path for future empirical work to confirm and extend these results. By providing an integrated framework for GenAI-driven supply chain integration, this study will aid academic research and practical solutions to enable more robust, efficient, and sustainable supply chains.

6.2 Unveiling the Role of AI in Project Scheduling: Opportunities and Challenges

Authors: Kasun Wijayagurusinghe *(Cleveland State University)*
Chris Wimer *(Cleveland State University)*
Abdullah Oguz *(Cleveland State University)*

Much attention has recently been given to the potential for AI to revolutionize many aspects of work due to its capabilities. Despite this interest, however, a collective view of the broad ways in which AI can influence aspects of a specific area of work has yet to receive much study in the existing literature. In this study, a qualitative thematic analysis approach is used to better understand how adopting and implementing AI technologies in the field of project scheduling are perceived as leading to major changes in this area of work. From this analysis, AI is shown to have an impact on project scheduling through its abilities to both enhance and optimize processes within this area, but further research is needed to better understand how to successfully integrate AI into a workplace as well as the various

implications which arise from incorporating AI into a given area of work.

6.3 The Role of Food Donations and Recycling in Reducing Food Waste in Supply Chains

Authors: Shahryar Gheibi *(Siena College)*
Jennifer Pazour *(Rensselear Polytechnic Institute)*

Do donations help reduce food waste? Indeed, they do, conventional wisdom may suggest. Our paper takes an in-depth look at the impact of food reuse (donations and recycling) on food waste and attempts to provide an answer grounded in empirical data and informed by an analytical model.

We find, interestingly, that the majority of food types feature supply chains with evidence of ""oversupply"" in the sense that the food surplus growth significantly exceeds the consumption growth.

Our paper examines the importance of accounting for the impact of donation incentives and capacity on the stakeholders' behavior and decisions. We hypothesize that a dynamic feedback loop underlies the oversupply phenomenon and construct an analytical model to provide insights into it. Our paper shows that food reuse incentives may have counterintuitive effects on food waste.

Track 7: Emerging Scholars II: Cybersecurity, Threat Detection, and Using Machine Learning

Room: WC S204C (11:00 am - 12:20 pm)
Moderator: Lisa Walters *(State University of New York at Fredonia)*

7.1 The Use of Neural Networks in Cyber Threat Intelligence

Authors: Robert G Cutlip *(Fairmont State University)*
Rebecca Giorcelli *(Fairmont State University)*
Teame Gidena Hiben *(Fairmont State University)*
Gebrehiwot Tadesse Gebremariam *(Fairmont State University)*
Getachew Hailu Kinfu *(Fairmont State University)*
Yeabsira M Dana *(Fairmont State University)*

Neural networks have emerged as a cornerstone of artificial intelligence, offering unparalleled capabilities in Cyber Threat Intelligence (CTI). These models mimic biological neural systems and employ multilayered architectures to process vast and complex datasets, enabling real-time detection and analysis of sophisticated cyber threats. From feedforward networks to advanced frameworks like convolutional neural networks (CNNs) and recurrent neural networks (RNNs), neural networks have revolutionized anomaly detection, intrusion identification, and phishing prevention. CNNs excel in image recognition tasks, such as identifying malware through pixellevel analysis, while RNNs, particularly Long Short-Term Memory (LSTM) networks, are adept at handling sequential data for log monitoring and threat pattern recognition. Generative Adversarial Networks (GANs) further enhance CTI by simulating potential attack scenarios, enabling proactive defence strategies. Despite these advancements, challenges remain, including the interpretability of "black-box" models, data imbalances, and vulnerability to adversarial attacks. Addressing these requires robust data preprocessing, regularization techniques, and the integration of explainable AI methods. This paper

highlights the transformative impact of neural networks in CTI, emphasizing their role in improving threat detection accuracy, enabling automated response systems, and fostering resilience against evolving cyber threats. As these technologies continue to evolve, their integration into cybersecurity ecosystems promises enhanced protection for critical infrastructures and digital assets. Future research should focus on scalability, ethical considerations, and developing hybrid models to address the dynamic nature of cyber threats.

7.2 Application of Anomaly Detection Approaches in Cyber Threat Intelligence

Authors: Robert G Cutlip *(Fairmont State University)*
Rebecca Giorcelli *(Fairmont State University)*
Gebrehiwot Tadesse Gebremariam *(Fairmont State University)*
Yeabsira M Dana *(Fairmont State University)*
Getachew Hailu Kinfu *(Fairmont State University)*
Teame Gidena Hiben *(Fairmont State University)*

Anomaly detection, a critical data mining technique, plays a vital role in cyber threat intelligence by identifying deviations from normal patterns in data, often signaling security breaches, fraud or other malicious activities. This study examines machine learning (ML) methods including supervised, unsupervised and semi-supervised approaches and their effectiveness in detecting anomalies. Techniques such as k-nearest neighbors, support vector machines, isolation forests, autoencoders and generative adversarial networks (GANs) with their ability to analyze high-dimensional and complex datasets are explored. Machine learning enhances anomaly detection by enabling systems to learn from evolving data patterns, improving accuracy and adaptability. For instance, deep learning models like autoencoders excel in identifying subtle and dynamic cyber threats while traditional methods like random forests and DBSCAN can be effective in less complex scenarios. Integrating these techniques into cybersecurity frameworks strengthens the ability to detect unauthorized access, malware, and data exfiltration by providing proactive threat mitigation. However, challenges like imbalanced datasets, computational demands and scalability issues remain barriers to implement Anomaly detection approaches for accurate cyber threat intelligence. Addressing these challenges through hybrid models like explainable AI tools and domain-specific optimization is critical for future progress. This study underscores the importance of anomaly detection in cybersecurity, emphasizing its ability to enhance threat intelligence, reduce false positives and support real-time decision-making. By leveraging advanced ML techniques, organizations can better protect their digital assets against increasingly sophisticated cyber adversaries which indicates that anomaly detection is a cornerstone of modern cybersecurity strategies.

7.3 Leveraging Behavior-Based Anomaly Detection for Protecting Internet of Things (IoT) Devices

Authors: Saumya Ranjan Padhi *(Northwood University & DevOS Graduate School)*
Adeeda Mukhtar *(Northwood University & DevOS Graduate School)*

Internet of Things (IOT) devices and connected devices are increasing in huge volumes making it more vulnerable to cyberattacks. As these devices have limited security measures. The study aims at exploring the capability of training machine learning models to detect anomalies in IoT devices. The dataset containing details such as botnet, normal, network traffic, packets, size of malware capture logs and other relevant information. The dataset contains network traffic data which is labeled and further categorized. During the study we did pre-processing, cleaning and subgrouping of the dataset. There was various result of models that were further correlated to reduce noise and trained using supervised machine learning models such as Logistic regression, least square regression, Random Forest, Adaptive boosting, best values and Deep neural networks. The major issues studied here are

Malware inspection (when there are high file sizes or increase of abnormal packets sizes reported compared to the regular behavior), Denial of service attacks (with interval of packets ranging more frequently from different or blacklisted Ips) and tracking unauthorized access (Binary and multi class identification of attacks column and correlated columns). During the study we found the models Adaptive boosting and Range Forest had seemed suitable having optimal values close to 80% of accuracy. More improvement can be incorporated by speeding up training times, reducing some dimensions to make it faster, efficient and higher accuracy thus can be useful for real-time anomaly or attack prediction.

7.4 Real-Time Video Frame Similarity Measurement on Raspberry Pi Using SSIM

Authors: Jackson L Osborne-Coy *(State University of New York at Fredonia)*
Shahin Mehdipour Ataee *(State University of New York at Fredonia)*

Monitoring dynamic scenes efficiently is crucial in various applications, such as security, automation, and research on periodic scene detection. In this project, we developed an application that runs on a Raspberry Pi computer, utilizing an HD camera to continuously monitor a scene by comparing each video frame to a reference frame. The application employs the Structural Similarity Index (SSIM) to measure similarity, logging similarity scores in real-time. Implemented in Python, this system is part of a larger research initiative aimed at detecting periodic patterns in video streams or recorded footage.

The motivation for this work stems from the need to create an embedded, cost-effective, and efficient solution for video analysis. Existing methods for frame similarity measurement often rely on computationally expensive algorithms or require high-performance hardware, making them unsuitable for embedded systems. Our approach seeks to optimize the SSIM computation so that it runs efficiently on low-power devices like the Raspberry Pi. This optimization is essential for real-time processing, particularly when transitioning to even more resource-constrained hardware such as the Raspberry Pi Pico microcontroller.

Our results indicate that SSIM provides an adequate level of accuracy for similarity measurement within the constraints of the Raspberry Pi. The performance, while acceptable at this stage, suggests potential for further optimizations to improve computational efficiency. Future work will focus on refining our implementation to operate on less expensive platforms, specifically the Raspberry Pi Pico, ensuring that the system remains both accurate and energy-efficient. The insights gained from this research will contribute to the broader objective of automated periodic scene detection in video streams using embedded systems.

Concurrent Sessions III (Thursday – 2:50pm) Tracks 8-11

Track 8: Analytics in Business Education

Room: WC S204A (2:50 pm – 4:10 pm)
Moderator: Nazik Roufaiel *(SUNY-ESC Center for Distance Learning)*

8.1 Empowering Education: the Transformative Role of Business Analytics in Decision-Making and Operational Efficiency

Author: Abdelghani Mehailia *(Yorkville University)*

Over the past few years, data analysis has become critical for enhancing educational practices and

outcomes at all educational levels. Educational institutions can use the extensive amount of data produced by educators, students and academic systems to gain insights and improve decision-making. This enables educators to gain a deeper understanding of trends in student performance and behavior. It would also help them to develop learning strategies and predict student performances. Besides, data analytics (DA) plays an important role in developing and improving the content of courses delivered to students. In addition, data analytics tools will allow improve efficiency in the allocation of resources and assist educational institutions in developing strategies to increase the retention of students. The paper discusses several applications & success stories of data analytics in the education industry namely universities and online learning websites.

8.2 Experiences with Experiential Learning in a Graduate Business Analytics Program

Authors: Necip Doganaksoy *(Siena College)*
Travis Brodbeck *(SUNY Albany & Siena College)*

Experiential learning is increasingly embraced by business schools as a means of bridging classroom knowledge with practical applications. In the context of business analytics programs, it provides students with opportunities to tackle real-world problems by translating them into solvable technical questions and effectively communicating their findings to stakeholders.

Given the relatively recent adoption of these programs, there is no unified or universally accepted approach to integrating experiential learning into business analytics curricula. However, some of the most common methods include (Ritter, Jones-Farmer, & Faltin, 2024):

• ""Live"" Project Classes: Engaging students in real-world projects with external partners.

• Case Study-Based Courses: Applying analytics techniques to structured, real-life scenarios.

• Projects Embedded Within Methodology Courses: Allowing students to practice techniques within the specific context of a course.

This presentation shares our early experiences incorporating experiential learning into our graduate business analytics (MSBA) curriculum. While we utilize all three methods outlined above, the cornerstone of our experiential learning approach is the capstone project.

In the capstone project, we adopt a live-project approach in collaboration with functional departments on our campus, offering students a hands-on, interdisciplinary experience. Additionally, we incorporate community-engaged projects, where students apply their data analytics skills to support local organizations.

We hope these experiences will foster a forum for sharing insights with similar programs aiming to enhance experiential learning in their curricula.

8.3 Effective Planning and Implementation in Academic Institutions Through Business Analytics and Project Management

Author: Eren Akdur *(Ithaca College)*

The effective implementation of strategic plans in academic institutions requires a seamless integration of project management methodologies and data-driven business analytics. Together, these

approaches help align institutional goals with practical, actionable strategies, ensuring progress and adaptability.

Achieving and maintaining accreditation further underscores the need for structured planning and implementation, emphasizing stakeholder engagement and continuous improvement. In this context, Kanban boards, widely recognized as an effective task management tool, emerge as a pivotal resource. When integrated with technologies like Power Automate and Power BI, Kanban boards enhance workflow management, facilitate better communication, and improve organizational agility.

These technologies enable the creation of a Management Information System (MIS) with dashboards that offers structured planning, real-time insights, progress tracking, proactive risk mitigation, and continuous optimization. Such an approach ensures that institutions remain agile, accountable, and aligned with their strategic objectives.

This presentation delves into the role of business analytics and project management as the driving forces behind using Kanban boards for strategic plan implementation. By leveraging task visualization, risk management, and evidence-based archives, the framework supports data-informed decision-making, streamlines operations, and facilitates the achievement of institutional goals.

Track 9: Applied Economics

Room: WC S204B (2:50 pm – 4:10 pm)
Moderator: Ai Ren *(SUNY New Paltz)*

9.1 Bridging Leadership Gaps: Unveiling a New Global North-South Assessment Tool

Authors: Richard J Muszynski III *(Wilkes University)*
Mona Pearl *(Wilkes University)*
Bruno Sergi *(Harvard University)*

The disparity between the Global South and Global North has gained prominence in classifying countries according to economic, social, and governance characteristics, rather than historical links. Historically, the Global North has long been regarded as the dominant group of nations, far outperforming Global South countries; however, several Global South nations now outperform the Global North nations in multiple measures with increasing economic and political strengths that draw attention to their unique leadership challenges and opportunities. Traditional measures like GDP per capita often overlook the intricate leadership dynamics essential for understanding developments in both regions. This study introduces a novel approach to evaluating global leadership transitions by expanding on the Global South Leadership (GSL) Index. The developed GSL Index equips policymakers, business professionals, and leadership with deeper insights into governance styles and leadership dynamics, and this comprehensive approach encompasses economic performance, social mobility, and governance structures to accurately assess a nation's performance across various indicators. Scores are obtained from 18 indices across 192 nations; each index measures a unique characterization of the country. All scores are converted to a 0 to 100 percent index scale, then averaged across all indices for each nation to create the expanded GSL Index. Relationships, patterns and trends are identified through scatter plots between Global North and South countries and among the regions within. The study extrapolates why some Global South countries are outperforming and others are underperforming, and the ones that have overcome obstacles and become role models for other Global South and North countries.

9.2 Share-the-Road: Exploring the Relationship Between Bicycle-Sharing and Ridesharing Platforms

Author: Ayush Sengupta *(Alfred University)*

In this paper, we explore the relationship between bicycle-sharing platforms such as Citi Bike and ridesharing platforms such as Lyft. The two groups of platforms are both relatively new business models in the transportation service industry and are driven by innovative online technologies. It is debated in academic research and in industry whether the two types of platforms have a complementary or substitution effect on each other. Some argue that the bicycle-sharing platforms may help alleviate the last-mile barrier in urban transportation and benefit ridesharing platforms by providing additional customers from their untapped market and by improving their financial situation. Others suggest that an adverse impact of bicycle-sharing platforms on ridesharing platforms may arise through a reduction in the ridership of the latter, especially over short trips, due to a substitution effect. We focus on answering this question empirically by examining the impact of the entry of Citi Bike on the ridership of all ridesharing platforms, in the context of New York City. We analyze data on ridesharing-platform ridership, measured by the number of their pick-ups. Through our analyses, we examine how Citi Bike's entry influences ridesharing's popularity in a large metropolis and how the impact varies across trips with different travel distances. We also analyze how Citi Bike's entry influences pooled ridesharing trips and ridesharing trips during rush hours. Our findings offer insights for bicycle-sharing and ridesharing-platform companies to make business decisions and for policymakers to devise policies to improve traffic congestion and reduce vehicular emissions.

9.3 A Functional Covid Recovery: Applying Functional Data Analysis to the Post-Covid Economic Recovery

Authors: Justin Petrovich *(Saint Vincent College)*
Zachary G Davis *(Saint Vincent College)*

The economic recovery after the response to the COVID-19 pandemic varied considerably across counties. Using data from Opportunity Insights, we employ functional data techniques to model the recovery of employment, consumer spending, and small businesses among counties as a function of time. Specifically, we regress the functional recovery data on pre-2020 American Community Survey data to estimate the time-varying effects of pre-pandemic county demographics and industry distribution on the course of recovery. From this we learn, for instance, that counties with a higher 2019 share in six different industries---agriculture, extraction, construction, transportation, finance, and accommodations--saw positive overall recovery in employment, with an increasing rate of recovery. Other industries had more mixed, or even negative effects on the change in employment. We also use cluster analysis on the functional recovery data to identify four different recovery patterns across counties. Counties in these four clusters are distinguished primarily by a) the magnitude of their initial declines in employment and b) the rate of increase in employment following that initial decline. The results from these analyses can be used to help municipalities plan and anticipate the economic impact of future similar disasters.

Track 10: Human Resources

Room: WC S204C (2:50 pm – 4:10 pm)
Moderator: Mary Han *(Toronto Metropolitan University)*

10.1 The Effects of Human Resource Management on Performance: the Mediating Role of Artificial Intelligence

Authors: Alexandra Cuero *(Alfred University)*
Halil Zaim *(Alfred University)*

This study explores the impact of Human Resource Management (HRM) practices on organizational performance and examines the mediating role of Artificial Intelligence (AI). A field study was conducted in New York State, involving 614 participants employed in various companies across different roles. Using the PROCESS Model 4 in SPSS, we analyzed data from 559 valid responses. The results reveal a significant direct effect of HRM on performance ($\beta = 0.5239$, $p < 0.001$), indicating that well-implemented HRM practices enhance organizational outcomes. Furthermore, HRM positively influences AI adoption ($\beta = 0.3458$, $p < 0.001$), which in turn contributes to improved performance ($\beta = 0.2069$, $p < 0.001$). The mediation analysis confirms that AI partially mediates the relationship between HRM and performance, with a significant indirect effect ($\beta = 0.0715$, 95% CI [0.0406, 0.1065]). These findings underscore the growing role of AI as a facilitator in HRM-driven performance improvements, highlighting the need for organizations to integrate AI strategically within HRM frameworks.

10.2 Assessing Employee Emotions at Work to Predict Organizational Citizenship Behavior

Author: Lipika Arif *(SUNY-Fredonia)*

Nowadays, an organization faces the great challenge of maintaining competitive advantages in a rapidly changing environment. The influence of globalization, changing political and geopolitical relationships, economic restructuring, and transforming communication and information technologies are shaping the modern business setting (McGuire, Cross, & O'Donnell, 2005). Many organizations recognize the importance of employees 'positive attitudes and behavior, such as organizational citizenship behavior (OCB) for beneficial organizational outcomes. As a discretionary behavior, OCB plays a positive role in supporting organizational benefits in terms of productivity, efficiency, and employee performance evaluations and promotions (Podsakoff et al., 2009). Although studies show the positive association of OCB with beneficial organizational outcomes, limited research focuses on the psychological aspects of employees for enhancing OCB. This study aims to investigate the role of positive affect in predicting OCB following affective organizational commitment as a mediator and leader-member exchange (LMX) relationship as a moderator. Time-lagged data were collected from 243 (n=243) teachers and staff from elementary, middle, high schools, and other schools in a public school system to test the hypothesized relationship. The result shows that there are significant positive relationships between positive affect and affective organizational commitment and affective organizational commitment and organizational citizenship behavior. This study also proposed that the relationship between affective organizational commitment and OCB is further stronger with the condition of LMX. This study offers meaningful theoretical and practical implications along with future research.

Track 11: Emerging Scholars III: Data Science and Public Safety

Room: WC S204D (2:50 pm – 4:10 pm)
Moderator: Lisa Walters *(State University of New York at Fredonia)*

11.1 Data Analysis of Crime Incidents in Buffalo, NY

Authors: Andriy Martynyshyn *(Buffalo State University)*
Reneta Barneva *(Fredonia State University of New York)*

Finding crime patterns and predicting crime are important for crime prevention and resource allocation. This helps law enforcement agencies deploying forces in the high-risk areas, potentially preventing crimes, which results in safer communities.

In this work, we explore the open data source https://data.buffalony.gov/Public-Safety/Crime-Incidents/d6g9-xbgu/about_data provided by Buffalo Police Department to better understand the crime patterns in Buffalo, NY. The database contains detailed records of crime incidents, including attributes such as incident type, date, time, location, and neighborhood, enabling a comprehensive analysis of crime distribution and trends.

We analyze crime incidents from multiple years (2022, 2023, and 2024) to uncover patterns and trends. The study focuses on identifying clusters across several dimensions.

The research involves three key phases:

1. Data Preprocessing: XML or JSON crime data is parsed to extract relevant fields, the coordinates are normalized, and the missing data is handled. Features such as ""time period"" and ""season"" are derived to enable a multidimensional analysis.

2. Clustering Techniques: Using a combination of K-Means, Hierarchical Clustering, and DBSCAN clustering techniques, the analysis reveals spatial, temporal, and seasonal patterns.

3. Results Analysis: The findings include:

o High-crime areas with recurring seasonal and temporal patterns, such as increased assaults in the summer evenings.

o Variations in crime types and frequencies across neighborhoods and months, emphasizing the need for targeted law enforcement.

The outcome of this project is a detailed understanding and visualization of the crime patterns in Buffalo, offering actionable insights to stakeholders.

11.2 Spatial Analysis Beyond Numbers: Demystifying Geographically Weighted Regression (GWR) and Multiscale Geographically Weighted Regression (MGWR) for Policy and Research

Authors: Krupa B Shah *(Ontario Tech University)*
Gabby Resch *(Ontario Tech University)*

In today's day and age, where the world is more connected than ever, it is easy to overlook the influence of local nuances in geospatial data. A one size fits all model can miss critical details hidden in spatial variability. Therefore, it is important to understand the weight of each independent variable affected by its geographical significance, especially in decision making for policy makers and researchers. The goal is to analyze spatial heterogeneity by tailoring the regression coefficients to geographic contexts. Geographically Weighted Regression (GWR) and its evolution, Multiscale Geographically Weighted Regression (MGWR), enable professionals to move beyond static, global models and embrace region-specific dynamics, ensuring more informed, actionable insights. This paper simplifies and demystifies the mechanics of GWR and MGWR, contrasting their methodological underpinnings and practical applications. By bridging theory with practice, to enhance the relevance to diverse fields like immigration policies and migration studies, urban planning, environmental management, and public policy.

11.3 Predictive Analytics for Accident Prevention in Autonomous Cars

Author: Sanika T Desai *(Adelphi University)*

Autonomous vehicles (AVs) are reshaping the future of transportation, offering the potential to reduce human error-related accidents. However, challenges remain in understanding and mitigating collision risks. This study leverages a large-scale dataset (2014-2024) to develop a predictive analytics framework aimed at accident prevention in AVs. By utilizing machine learning techniques such as random forests, logistic regression, and gradient boosting, the study identifies key predictors influencing crash-related injuries, including accident type, AV manufacturer, and vehicle damage severity. The random forest model demonstrated the highest predictive accuracy, effectively minimizing false negatives-an essential factor in ensuring AV safety.

To enhance model performance, this study employs stratified sampling and class weighting to address dataset imbalances, ensuring robust and unbiased predictions. The results offer actionable insights for AV manufacturers, transportation professionals, and policymakers, facilitating the development of improved safety protocols, vehicle designs, and regulatory measures. This research contributes to the growing body of work on predictive analytics in transportation safety, aligning with global initiatives like the United Nations' Sustainable Development Goal 3 to reduce traffic-related fatalities by 2030. By integrating data-driven methodologies, this study advances efforts to enhance AV reliability and public trust, paving the way for safer autonomous transportation systems.

11.4 Retaining Value: Segment-Based Predictive Models for Customer Churn in Banking

Authors: Priyal Rawat *(Northwood University)*
Abhishek Rajeev Sharma *(Northwood University)*
Itauma Itauma *(Northwood University)*

Customer churn is an everyday problem for the banking sector, particularly in a rapidly evolving marketplace where there is greater customer expectations and an increase in digital competition. This study establishes a machine learning framework for predicting customer churn on a segment basis for High Net Worth (HNW) and Regular customers. The study used models based on Logistic Regression, Decision Tree, Random Forest and Gradient Boosting, focusing on interpretability, alignment to the business, and ability to be scalable. A cost-sensitive learning approach was employed to deal with the class imbalance and a churn risk scoring system was introduced that enabled model results to be converted into prioritized intervention strategies for banks to retain customers. Feature importance analysis indicated that the drivers of churn were different between segments, validating the modeling

(HNW and Regular) on a segment basis. The framework developed here compromises a balance between predictive performance and explainability and is feasibly scalable to implement in practice for use in CRM systems. This study expands the literature addressing criteria for predicting customer churn in the banking context to include a replicable, interpretable, and data-driven approach to understand customer churn using a proactive approach and further, the approach taken considers personal retention strategies in the modern banking for customer relationship management.

Concurrent Sessions-IV (Friday – 9:30am) Tracks 12-15

Track 12: Advanced Business Analytics

Room: WC S204A (9:30 am - 10:50 am)
Moderator: Linda Hall *(State University of New York at Fredonia)*

12.1 Who is the Boss? from Agency Theory to Autonomous AI

Authors: Mary Han *(Toronto Metropolitan University)*

Literature on agency theory has documented monitoring, incentive and rewards to enhance agents' performance, but principal agent complexity persists. The rise of artificial intelligence seems to have added to this dynamic with much lower cost, higher accuracy and speed (which is good) but what if AI 'wants' to be the boss. While agents are rewarded for their managerial role on behalf of their principals, evidence exists that some even manipulate with fraud. The advancement of AI seems to have gradually shifted the agent's role as well as their ability to manipulate. AI capability has shifted from requiring data to be input for learning; to generative AI, meaning AI can generate outputs from data; to collaborative AI, where AI makes decisions alongside management; to autonomous AI where AI can decide and act without human supervision, input or intervention. In such cases, where do agents stand? While there are economic advantages, but who is the boss when AI can decide without the principal? We review traditional agency theory and situate extant AI capability to theoretically hypothesize how agency theory can explain the new phenomenon of principal agent dynamics in the new AI era. We conclude with theoretical and practical implications.

12.2 Data Analytics (DA) and Artificial Intelligence's (AI's) Impact on Jobs

Author: Joseph Porter, Jr *(Nazareth University, USA)*

In this session, I will share how Data Analytics (DA) and Artificial Intelligence (AI) are being used to transform jobs in industries like automotive, finance, and healthcare. During the presentation, I plan to discuss:

1. Productivity Trends: I will highlight data from multiple sources including the Federal Reserve to shows that productivity in companies have been increasing since World War II.

2. Automotive Industry: I will highlight the impact that DA and AI are having on jobs in the automotive industry: Robotics operating 24/7, self-driving trucks, etc.

3. Financial Industry: I will highlight the impact that DA and AI are having on jobs in the financial industry: data from AI Facial Recognition programs, mortgage approval, fraud detection on credit cards, etc.

4. Medical Industry: I will highlight the impact that DA and AI are having on jobs in the medical industry: detecting cancer using data from Mammograms, MRI, etc.

Optional Topics (If time permits):

• Education Industry: I would like to address the need for educators at the college/university level to teach how technologies will affect careers.

By discussion components above, I aim to equip educators with insights and methodologies to enhance analytics education."

12.3 Simplifying Survey Reporting: an R Solution for Calculating and Visualizing Key Metrics

Authors: Travis Brodbeck *(SUNY Albany & Siena College)*
Mohammad Wasim Shekh *(Siena College)*

The American Association for Public Opinion Research's (AAPOR) Transparency Initiative (TI) highlights the importance of reporting response rates for evaluating the quality of survey research studies. The process to calculate a survey's response rates, especially in research studies using multiple data collection methods, is labor intensive and at-risk of inconsistencies when using the industry provided Excel spreadsheet template. We developed an R-script to streamline the process of calculating response rates, for one or multiple surveys.

Using the AAPOR Response Rate Calculator V4.1, a Business Analytics graduate student and a survey researcher at the Siena College Research Institute (SCRI) collaborated to enhance the process of reporting various survey research metrics. Using a data file of case dispositions, the R script calculated and visualized contact, refusal, cooperation, and response rates, for one or multiple surveys simultaneously. To ensure accuracy and replicability, this script was tested in parallel with the industry provided Excel template. The R script's output matched the calculations from the Excel template across various survey disposition datasets. While differences in disposition code standards between pollsters may necessitate a translation map, this limitation is manageable and does not diminish the tool's overall utility.

This open-source R script can assist in reducing barriers to improve transparency and efficiency in the survey research industry. By enabling pollsters and researchers to automate response rate calculations, response rates can be calculated retroactively and for projects in the future enhancing the industry's ability to identify trends in response rates that ultimately affect survey representativeness.

12.4 Assessing the Appropriateness of Videometrics in Strategy Research on Firm Executives

Author: Andre Havrylyshyn *(Binghamton University)*

I am currently working on a paper which will test the validity of the videometrics approach in strategic leadership/ governance research. Scholars interested in how traits of CEOs influence firm-level outcomes have a major practical challenge: how do we get the access to high-level CEOs needed to do such research? CEOs of major firms are extremely busy and unable to fill out the surveys traditionally used in psychometrics research in organizational behavior research. To address this, some scholars have utilized a videometrics approach, where videos of prolific CEOs conducting interviews with news

reporters, are evaluated by third-party raters. While such an approach has been used in empirical papers in recent years, serious questions remain about whether this approach is appropriate and when. Are the behaviors of the CEOs in a public setting appropriate ways to assess their personality traits like narcissism, or their leadership styles when interacting with their employees within their firm? To address this, we utilize a unique survey we have obtained where CHROs of dozens of SP500 firms gave us evaluations of the personality traits and leadership styles of their CEOs, as they behave 'behind closed doors'. We have hired raters to then evaluate those same CEOs for the same traits, using a conventional videometrics approach. From here, we will compare where the videometrics approach aligns with the reports of colleagues of the CEOs, generating practically useful insights for scholars in the space looking for convenient ways to conduct nevertheless scientifically rigorous research.

Track 13: Finance, Marketing and Retail Analytics

Room: WC S204B (9:30 am - 10:50 am)
Moderator: Shazad Mohammed *(State University of New York at Fredonia)*

13.1 Do Banks' Self-Reported Stress Test Disclosures Convey Critical Financial Information? a Textual Sentiment Analysis

Author: Yi Zheng *(SUNY New Paltz)*

In this study, we conduct a textual sentiment analysis of hand-collected U.S. banks' stress test disclosure reports. Our findings reveal that sentiment factors, such as positive wording and strong modals, convey significant financial information about banks. Specifically, both factors are positively associated with banks' projected minimum and end Tier 1 capital ratios, as well as their equity-to-assets ratio. Additionally, positive wording sentiment reflects banks' financial standing, as indicated by z-scores. These results remain consistent across various robustness checks and endogeneity mitigation analyses. Furthermore, we find that textual sentiment provides informative insights into banks' performance and operations, including loan loss rate, net pretax income rate, dividend payout ratio, and cost of debt. Overall, the textual sentiment of banks' self-reported stress test disclosures is informative regarding their capital adequacy, financial strength, and operations.

13.2 The Discrepancy Between Green Reputations and Environmental Performance

Author: Joon Yong Seo *(SUNY Brockport)*

While extensive research exists on various aspects of green marketing, little attention has been given to how a firm's environmental initiatives shape public perceptions of its overall corporate greenness. Our study investigates whether and to what extent consumer perceptions of corporate greenness align with objective measures of environmental performance. Additionally, we explore factors that contribute to discrepancies between corporate green reputations and actual environmental impact.

Our findings indicate that firms' green reputations are influenced by their environmental management practices and disclosure efforts. However, these reputations do not always reflect objective environmental impact outcomes. Notably, firms with poorer environmental impact tend to engage more actively in environmental disclosures (""green talking""), which in turn enhances their perceived greenness.

Understanding the relationship between actual and perceived corporate greenness is crucial for protecting consumers and investors, ensuring fair competition, and fostering a more transparent and

sustainable green market.

13.3 Bridging the Divide: Industry Insights on Retail Location Analytics and AI

Authors: Tony Hernandez *(Toronto Metropolitan University)*
Joseph Aversa *(Toronto Metropolitan University)*

This paper examines the locational decision-making practices of major retail and service firms operating in Canada. The paper explores the changing nature of location decision-making based on ion-depth interviews with key decision-makers within leading corporations. The interviews highlight the increasing challenges organizations face in integrating diverse big data sets within traditional decision-support approaches. The findings reveal a growing divide between rapidly emerging data science-based methods and legacy spatial analytical approaches. While the emerging techniques provide opportunities to enhance decision-making, there are many challenges to fully leveraging these new approaches. The paper critically explores the inertia in location decision-making cultures. It provides insights into the organizational and data infrastructural elements that need to be in place to promote the adoption, use and development of data science and AI-enhanced decision support. The implications of the findings to higher education are also discussed, with educators faced with a growing challenge in keeping pace with industry and maintaining the relevancy of the curriculum and currency of skill sets.

13.4 Valuing Commercial Real Estate and Its Real Options

Authors: Robert Jarrow *(Cornell University)*
Crocker Liu *(Cornell University)*
Motoyuki Yoshihara *(Cornell University & US Army)*

Using an extension of standard option pricing theory for sporadically traded assets, this paper presents a new methodology for valuing commercial real estate (CRE) and real options on them. We apply this method to value multifamily apartments in Los Angeles, California over the 2001 - 2019 time period and compare it to a standard hedonic model. Our model performs better both in- and out-of-sample, maintaining robustness despite changing market conditions. We also illustrate how to use our approach to value a European call option to purchase a CRE. Thus, our approach can be useful to practitioners, both those that transact in commercial real estate, as well as its derivatives.

Track 14: General Analytics

Room: WC G103A (9:30 am - 10:50 am)
Moderator: Lisa Walters *(State University of New York at Fredonia)*

14.1 Exploring AI Power in Setting Prices: Testing the Design, Application, and Outcomes of PriceGPT Using Live Business Simulation Environments

Author: Joseph T Kuvshinikov *(Gannon University)*

This research study explores the design, application, and outcomes of PriceGPT, an AI-driven pricing optimization tool tailored to help product managers make smarter pricing decisions. PriceGPT utilizes advanced natural language processing and predictive analytics to recommend data-driven pricing strategies. Key features of PriceGPT include real-time analysis of decision maker inputs such as market demand, cost structures, competitive pricing, supply and demand, and business goals. These

capabilities enable users to make informed pricing decisions aligned with both market conditions and organizational objectives.

To evaluate its effectiveness, PriceGPT was tested using the Income|Outcome (IO) Business Simulation (Andromeda Simulations International), a highly interactive team-based platform that models real-world business competitive decision making, operations, and strategy. The IO simulation allows participants to consider and make decisions based on key variables such as supply and demand, cost structures, pricing strategies, and competition. By simulating the impacts of strategic decisions in a competitive marketplace, it provides a rigorous test environment for tools like PriceGPT.

Results demonstrated that participants using PriceGPT were able to make more informed decisions and were more effective in setting prices than competitors who did not use AI. PriceGPT's ability to synthesize complex variables and offer actionable recommendations highlights its potential to enhance decision-making in competitive and volatile markets. This study showcases the role of AI in bridging the gap between theoretical pricing models and real-world application. Future testing aims to incorporate broader external market indicators, such as customer sentiment and macroeconomic trends, and internal user price setting experience for even greater accuracy.

14.2 Enhancing Telecom Customer Retention: Advanced Predictive Modeling Approaches

Authors: Bahareh Rahmani *(Saint Louis University & Health and Clinical Outcome Research)*
Eli Snir *(Washington University)*

Customer churn remains a critical challenge in the highly competitive telecommunications industry, directly affecting financial stability and customer retention. Retaining existing customers is not only more cost-effective than acquiring new ones but also ensures long-term revenue growth and brand loyalty. This study aims to enhance churn prediction by leveraging a comprehensive dataset of 7,043 telecom customers, incorporating demographic details, service usage patterns, and financial interactions. We employ advanced predictive modeling techniques like Seasonal Moving Averages (SMA), to forecast churn likelihood and identify key determinants. Through data visualization techniques like scatter plots and time series decomposition, we uncover crucial trends influencing customer retention. Our findings indicate that factors such as monthly charges, total charges, and customer tenure are the strongest predictors of churn. Additionally, we explore the challenges posed by dynamic changes in revenue and customer preferences, emphasizing the need for adaptive predictive models. This research provides valuable insights to help telecom companies implement proactive retention strategies and improve customer loyalty.

14.3 Examining the Pathways of Consumer Animosity: a Structural Equation Modeling Study Across Japan and the Philippines

Authors: Reynaldo Bautista *(De La Salle University)*
Luz T Suplico Jeong *(De La Salle University)*
Takanori Osaki (*Kagawa University)*
Michele Stewart *(University of Windsor)*

This study examines how consumer animosity influences anti-consumption behaviors such as boycotts and negative word-of-mouth (NWOM) in Japan and the Philippines. Using Structural Equation Modeling (SEM), the study investigates the mediating role of fear and the impact of perceived media intrusiveness on consumer animosity. A cross-sectional survey collected data from 650 respondents (325 from each country) exposed to online media coverage of geopolitical conflicts, such as the Russia-Ukraine war.

Results revealed that consumer animosity strongly predicts fear in both countries (Japan: coefficient = 0.683, Philippines: coefficient = 0.675, $p < 0.001$). Fear significantly impacts both boycott intentions (Japan: coefficient = 0.350, Philippines: coefficient = 0.434, $p < 0.001$) and NWOM (Japan: coefficient = 0.204, Philippines: coefficient = 0.328, $p < 0.001$). Perceived media intrusiveness also strongly influences consumer animosity (Japan: coefficient = 0.468, Philippines: coefficient = 0.380, $p < 0.001$).

Cultural differences were evident, with stronger effects of fear on NWOM and boycott behavior in the collectivist Filipino context compared to Japan's hybrid cultural orientation. Despite these differences, the structural relationships were invariant across the two groups, suggesting universal pathways in the animosity-fear-consumption behavior link.

The findings emphasize the role of media in shaping consumer emotions and behaviors, offering critical insights for marketers and policymakers. Strategies that acknowledge cultural nuances can mitigate the adverse impacts of consumer animosity during geopolitical conflicts.

Track 15: Emerging Scholars IV: Economics and Policy

Room: WC G103B (9:30 am - 10:50 am)
Moderator: Megan Johnson *(State University of New York at Fredonia)*

15.1 A Data Driven Analysis of Consumer Heterogeneity in the Causal Effects of Interest Rate Changes in Economic Behavior

Authors: Phalguni Unmesh Mahajan *(State University of New York at Buffalo)*

When the central bank announces changes in the interest rate, not all households ride the wave uniformly. Instead, the adjustment in monetary policies represents a heterogeneous mosaic in consumer responses influencing activities like consumption, debt management, savings and investments. This study aims to evaluate the disparity in the impact of the interest rate tweaks on the economic behavior of different consumer segments. Previous research has investigated how rate changes affect economic behavior at an aggregate level. This study bridges the gap by performing a granular analysis of the wide-ranging reactions to better aid in the targeted cognizance of policymakers and businesses. We combine the macroeconomic time series data with the consumer level datasets to assess how monetary policy shifts affect investments, savings and consumption in diverse segments. The study employs econometric models like Difference-in-differences and Instrumental Variable to separate any exogenous impact on the interest rates. To enhance the stakeholder engagement, interactive dashboards from Power BI were employed to display the causal linkage between pre and post policy trends. To address the non-linearities in the data and enhance our feature selection we augment the econometric models with machine learning techniques. Our findings demonstrate significant disparities in consumer responses. For example, middle aged households tend to save on their disposable income and delay their investments during rate hikes as compared to the younger customers. These findings can therefore enable businesses to optimize their offerings per consumer and policymakers can better design targeted interventions.

15.2 Report on Crude Death Rate from Drug Poisoning and Related Variables

Authors: Alexandra Gillispie *(University at Buffalo)*
Alexandra Stathopoulos *(University at Buffalo)*
Janelle Valentine *(University at Buffalo)*

This study explores the relationships between how time, age, and gender affect the crude death rate due to drug poisoning mortality within the United States. The dataset being examined contains records of mortality due to drug poisoning across the United States from 1999-2018. The analysis employs two-sample t-tests, a correlation test, and an ANOVA test to examine the incidence of deaths from drug poisoning and how crude death rates differ across the factors of time, gender, and age. Results indicate that more recent years (2009-2018) are significantly associated with higher crude death rates due to drug poisoning. Similarly, the results when age was tested against crude death rates indicated that there is a significant difference in overall crude death rates across age groups, specifically the population of ages 35-54. Lastly, the results affirmed our hypothesis that males have significantly higher death rates from drug poisoning than females. These findings indicate the importance of understanding factors that contribute to higher rates of deaths from drug poisoning, and ultimately the importance of this issue. Future research could benefit from a dataset that includes the type of drug poisoning when considering the overall risk of death from drug poisoning.

15.3 An Analysis of Energy Sector Allocations Within the U.S. Powergrid

Authors: Robert G Cutlip *(Fairmont State University)*
Rebecca Giorcelli *(Fairmont State University)*
K Saunders *(Fairmont State University)*
M Goff *(Fairmont State University)*
X Lopez *(Fairmont State University)*
D Messner *(Fairmont State University)*
Isaac Guentert *(Fairmont State University)*

The purpose of this inquiry was to analyze the United States powergrid to characterize the current state of energy sector allocations and projected changes for the near term. Historical sector data was analyzed, and forecast models were generated in Coal, Nuclear, Wind, Hydroelectric, Petroleum, Fuel Cell, Geothermal, Solar, and Natural Gas sectors. Descriptive analysis showed the percentages of the primary sectors contributing to the powergrid were Natural Gas (43.1%), Nuclear (18.6%), Coal (16.2%), and Hydroelectric (10.2%). Forecasting models were generated for each energy sector based on historical data through the year 2035. Prescriptive analytics were generated to support recommendations for a more resilient and climate friendly grid. Recommendations include expanding nuclear power and equipping nuclear facilities to revert to coal-fired operation in case of uranium supply disruptions; expanding renewable energy sources, such as wind and solar, to reduce natural gas-fired generation; optimizing existing hydropower assets through infrastructure retrofitting and operational enhancements; exploring alternative hydropower solutions, such as in-stream turbines and pumped storage facilities, to expand capacity; promoting domestic production of renewable energy components through tax incentives and grants; and, strengthening trade policies to prioritize domestic sourcing. The grid should be modernized by upgrading aging infrastructure and implementing smart grid technologies. Lastly, cybersecurity measures should be enhanced to protect critical infrastructure assets from cyber threats and attacks. Final recommendations for a more balanced grid suggest energy sector re-allocations to Nuclear (30%), Natural Gas (28%), Hydroelectric (15.2%), Coal (10%), and Solar (9%) by year 2035.

Undergraduate Poster Session in Analytics

MPR Ring, WC
Judging time: 11:00am to 12:20pm, Thursday, May 8th, 2025
Judging time: 11:00am to 12:20pm, Friday, May 9th, 2025

Poster 1: Testing the Golden Ticket Syndrome: are Pronatal Financial Policies Effective?
Authors: JaeRyoung Lee *(State University of New York at Fredonia)*
Mentor: Dr. Adam Cook *(State University of New York at Fredonia)*

In a report released on January 6th 2023 by the Korean Economics Institute of America, economist Randall Jones addressed the low youth employment rate in the Republic of Korea. His analysis focused on the competitive nature of secondary education and tertiary education enrollment, and the cultural pressure for the youth to secure employment in a company for social status, coining the term "Golden Ticket Syndrome". In this paper, I will test if the Golden Ticket Syndrome affects fertility rates. Indicators commonly associated with the syndrome, such as youth unemployment rates, tertiary education attainment rates, prevalence of a caste system, and composition percentage of services in total GDP. Upon building the model to estimate fertility rates, I will then use data from Japan and Korea to test the effectiveness of government sponsored pronatalist financial aid policies. The results of this analysis will give insights into the non-medical factors that affect the motivators behind child birth.

Poster 2: A Model Framework for Automating the Recruitment Process
Authors: Jyoti Singh Rojariya *(Alfred University)*
Mentor: Ayush Sengupta *(Alfred University)*

The primary aim of this paper is to propose a framework for evaluating the compatibility between a candidate's personality and a company's culture. The framework is designed to assess the alignment of an individual's traits with both the broader company culture and specific team cultures. This evaluation is based on the interaction between three key dynamics: company culture, team culture, and personality. We conceptualize company culture as a set of metrics that are organized across various levels to provide a detailed and multifaceted framework. In this framework, we distinguish between general company culture-reflecting organizational-wide characteristics-and team culture, which is tailored to the unique dynamics of specific teams within the organization. The personality dynamic encompasses individual traits, linked to the aforementioned cultural metrics to enable a quantitative assessment of their compatibility. This paper builds on existing literature on organizational culture and personality traits to develop a more precise and measurable approach to aligning candidates with company values and team dynamics. The core objectives of this study are to (1) establish measurable metrics for different types of company culture and team culture, (2) propose a flexible framework for exploring the relationship and assessing the fit between the dimensions of company culture and team culture, and individual personality traits.

Poster 3: The Overall Effect of Education on Income Inequality
Authors: Jaynul Abedin *(Alfred University)*
Mentor: Ayush Sengupta *(Alfred University)*

Income inequality in the US has been increasing as the population grows rapidly. With the growth of the population, the economic imbalance is also increasing, which is impacting the national budget as well. According to economic researchers, one of the main reasons behind this is the lack of proper education or not having the willingness to get an education, leading to income inequality, and poverty. Some other potential factors that can contribute to income inequality are health conditions, physical activity, and the pay gap based on gender. My paper will conduct thorough research on the effects of education on income inequality where the independent variable is going to be education and income inequality as the dependent variable. In addition, other control variables or independent variables that I am going to take into account are unemployment, physical inactivity, alcohol consumption, and the gender pay gap. Throughout this paper, I was able to demonstrate that there is a significant impact of education on income inequality. However, the control variables that I selected for this paper were needed to make the impact statistically significant which means that those variables significantly affect income inequality as well.

Poster 4: Order Accuracy Through Order Number Sticker Systems
Authors: Kloee Yanni *(State University of New York at Fredonia)*
Prince Ntor *(State University of New York at Fredonia)*
Mentors: Dr. Lisa Walters, Dr. Lipika Arif *(State University of New York at Fredonia)*

This research project examines how technological innovations can improve order accuracy at Company T, addressing its competitive disadvantage relative to its direct competitor, Company D. By implementing an order number ticket/sticker system, this study explores how such technology can streamline the order fulfillment process, reduce human error, and minimize revenue loss due to inaccurate orders. A comparative SWOT analysis of Company T and Company D reveals key areas where Company T lags behind and how technology can enhance operational efficiency, improve employee satisfaction, and boost revenue generation. Additionally, quality management analytics are used to identify significant quality complaints and root causes. Prioritization matrices guide the development of targeted recommendations to address these root causes and improve the overall quality control processes. Ultimately, this research highlights the potential financial and operational benefits of adopting technological advancements, including cost savings and improved customer satisfaction, through more efficient order processing and reduced errors.

Poster 5: Decoding Crime: a Data-Driven Investigation of in Los Angeles
Author: Molly Sheehan *(State University of New York at Fredonia)*
Mentor: Dr. Megan Johnson *(State University of New York at Fredonia)*

Does a love of math correlate with a love of true crime? In this paper-it does! Inspired by a love of true crime shows, we sought to investigate trends in criminal activity, in an attempt to predict future crime patterns. This research was initiated as part of an honors thesis course, focusing on criminal activity reported in Los Angeles between 2020-2023. Utilizing a comprehensive public dataset composed of various types of crime, this project aims to identify key features correlated with the solvability of criminal cases. Based on analysis in R, findings suggest a significant relationship between when a

crime occurs and its solvability, as well as other variables such as location, victim characteristics, severity, crime type, and length of time until report. By using data analytics, this project contributes to a deeper understanding of crime, providing insights that law enforcement can use to enhance solvability strategies in Los Angeles and beyond.

Poster 6: The Impact of TikTok and Short-Form Videos on Gen Z Communication Styles in the Workplace
Author: Jude Lord (State University of New York at Fredonia)
Mentor: Dr. Lisa Walters (State University of New York at Fredonia)

This independent study examines the impact of TikTok and short-form video platforms on Gen Z communication styles within the workplace. As the first generation to grow up entirely in the digital era, Gen Z brings unique communication preferences shaped by platforms like TikTok-favoring brevity, informality, visual elements, and trend-based storytelling. These emerging styles often diverge from traditional workplace norms, presenting both opportunities and challenges for organizational communication. The study aims to explore which elements of TikTok's format-such as hashtags, humor, visual storytelling, and rapid information delivery-are being integrated into Gen Z's workplace interactions. It also investigates whether these styles foster or hinder effective communication, especially in multigenerational settings where differing expectations can lead to misunderstandings. The research is conducted through a multi-method approach, including a literature review on generational communication differences and digital media influence, a content analysis of at least 30 TikTok videos related to workplace communication, and sentiment analysis of 30 critical incidents found in public forums like LinkedIn, Reddit, and Glassdoor. Key tools include Pareto charts and visual sentiment graphs to identify dominant themes and emotional responses. Findings from this study will offer insight into the most prevalent TikTok-inspired communication behaviors in professional environments and how they are perceived across generations. Recommendations will include strategies for organizations to leverage Gen Z's communication strengths-such as clarity, creativity, and engagement-while also ensuring professionalism and mutual understanding across teams. These insights aim to help employers foster inclusive, adaptable communication cultures that bridge generational gaps and enhance collaboration.

Poster 7: Innovations in Data Analytics for Accessible Communication: Leveraging Computer Vision for Real-Time ASL Fingerspelling Recognition
Author: Bex Piede *(State University of New York at Fredonia)*
Mentor: Dr. Megan Johnson *(State University of New York at Fredonia)*

According to the Americans with Disabilities Act (ADA), equal access to public services is required without additional charge. For members of the Deaf/Hard of Hearing (HoH), accessibility services are an afterthought. Coupling ignorance with scarcity, either minimal interpreting services are provided or available on a regular basis. Furthermore, deaf students and employees are not typically given accessibility services including interpreters nor offered alternative communication options. According to language consulting firm Nimdzi, "This limits the deaf person's access and hinders their ability to work at their full potential." Developing an open source computer vision (CV) program which outputs accurate English translations given video input of American Sign Language (ASL) fingerspelling will greatly improve accessibility, ease of use, and increase utilization of interpretation services. In conceiving of the program, it became clear that there are insufficient, and frankly inadequate, open source datasets available for CV training. Hence, our first step will be to collect handshape images

from a large, diverse group of individuals. Using those images, we will train a computer model to recognize ASL handshapes. In further research, we will produce Python code to generalize the model to one which accepts video inputs with the ultimate goal of reversing the translation process with use of generative AI.

Poster 8: Sales Analysis of Coffee Shop
Author: Lauren Green *(State University of New York at Fredonia)*
Mentor: Dr. Reneta Barneva *(State University of New York at Fredonia)*

The goal of this project is to examine a coffee shop's sales data in a way that addresses the type of coffee sold and seasonality of consumer preferences. Looking at sales data helps to define trends with respect relating to coffee and key factors that drive consumption of coffee. Understanding consumer behavior and market dynamics gives useful insights. In practice, these insights serve as a guide for an entrepreneur or a small shop's owner thinking and exploring to start up a coffee shop business.

Poster 9: Analysis of Nigerian Car Sales
Author: Habib Yusuff *(State University of New York at Fredonia)*
Mentor: Dr. Reneta Barneva *(State University of New York at Fredonia)*

This project analyzes car sales in Nigeria, specifically with respect to several factors, including make and model, color preference, and price points. By understanding these factors, the project should allow us to identify important trends and factors affecting the automotive market in Nigeria. The information gathered from the analysis will benefit car dealers interested in exporting cars to Nigeria. The study will help them re-align their sourcing strategies to meet market demands and choose from inventory selections to be more competitive.

Poster 10: Digital vs. Physical Music Sales in the U.S.
Ashlyn Dugdale *(State University of New York-Fredonia)*
Mentor: Dr. Reneta Barneva *(State University of New York at Fredonia)*

The project offers a comprehensive analysis of both physical and digital music sales, examining diverse questions to uncover trends and insights. It evaluates which music genre is most popular in sales and examines if digital downloads or physical formats, like CDs and records, are more profitable for artists. The study identifies the top five streaming sources in the US and states with the highest digital and physical music sales in 2024. It also highlights the top three selling US artists and the most streamed daily tracks worldwide, offering valuable guidance for artists. Ultimately, this analysis empowers artists to strategically succeed.

Poster 11: Cosmetology Customer Service Analysis
Author: Brayton Tripi *(State University of New York at Fredonia)*
Mentor: Dr. Reneta Barneva *(State University of New York at Fredonia)*

This project provides a comprehensive analysis of a cosmetic salon’s customer service data. It investigates several key aspects, including contact information, service type and timing, assigned employee, pricing details, service duration for kept appointments, customer feedback, ratings, and product recommendations. Additional factors such as membership status, loyalty points, customer preferences, appointment reminders, and the clients’ geographic state are also examined. The insights derived from this multifaceted analysis equip prospective entrepreneurs with valuable guidance on

customer management, service optimization, and strategic planning, ultimately aiding in the successful launch and sustainable operation of a salon business.

Poster 12: Spotify Global Streams Analysis
Author: Jash Parekh *(State University of New York at Fredonia)*
Mentor: Dr. Reneta Barneva *(State University of New York at Fredonia)*

This project utilizes Spotify Global Streams data to gain actionable insights into the ever-evolving music streaming industry. It analyzes the top five artists based on monthly listeners while separating out the top countries by streaming volume, and by counting downloads from free or paid subscribers. It identifies the artists and albums that are best suited for targeted promotional activity, compares genres by total streams, and the genres with the highest percentage of skips. It also looks to identify genres likely to experience growth based on the latest trending activity. A breakdown of listener activity over time is evaluated to provide a detailed overview of changing consumer behavior, which ultimately facilitates insight into promotional strategies in today's music market.

Poster 13: AI Market Worldwide 2020–2030
Author: Billie Coddington *(State University of New York at Fredonia)*
Mentor: Dr. Reneta Barneva *(State University of New York at Fredonia)*

This project analyzes the AI market as one of the fastest growing markets available, with applications in all aspects of life, from speech recognition to image processing and self-driving cars. New technology development and investment have resulted in a rapid growth rate. The AI market is a complete ecosystem which packages and combines software, hardware, and various services that empower all organizations to build and develop modern AI applications. Therefore, by analyzing the market landscape, this project provides information that will help stakeholders think strategically about how to best position their organizations to take advantage of the changes and diverse industry potential applications of AI development.

Poster 14: Analyzing Construction Project Specifications
Author: Abdullah Yusuf *(State University of New York at Fredonia)*
Mentor: Dr. Reneta Barneva *(State University of New York at Fredonia)*

The goal of this project is to provide an analysis of construction data and useful insights for the design process which helps with the construction documentation processing.

Poster 15: Behind a Business
Author: Carissa Shanahan *(State University of New York at Fredonia)*
Mentor: Dr. Reneta Barneva *(State University of New York at Fredonia)*

Poster 16: We study a dataset, which offers comprehensive data on different transactions in a business from 2017 to 2023 and answer a number of research questions. The data set contains commissions expense, consulting expense, cost of goods sold, marketing expense, payroll expense, R&D expense, sales, software/hardware expense, and travel & entertainment expense.

Poster 17: Online Retail Store Analysis
Author: Taylor Ingrao *(State University of New York at Fredonia)*
Mentor: Dr. Reneta Barneva *(State University of New York at Fredonia)*

The goal of this study is to provide company-wide sales analysis, offer strategic insights into product performance, geographic trends, consumer behavior and profit distribution. Using over 1,000 transactions across various cities and states, this analysis supports decision-making for marketing, inventory planning, and operational optimization.

Poster 18: Analysis of Chocolate Sales Worldwide
Author: Donevan Rotmans *(State University of New York at Fredonia)*
Mentor: Dr. Reneta Barneva *(State University of New York at Fredonia)*

This project analyzes the chocolate sales that differ worldwide, including most popular sales by country and what amounts they are purchasing at. The idea of this project is to point out the factors of the business side of chocolate to educate and allow businesses and distributors to take advantage of. This includes marketing and targeting for certain countries and products of chocolate they should be selling.

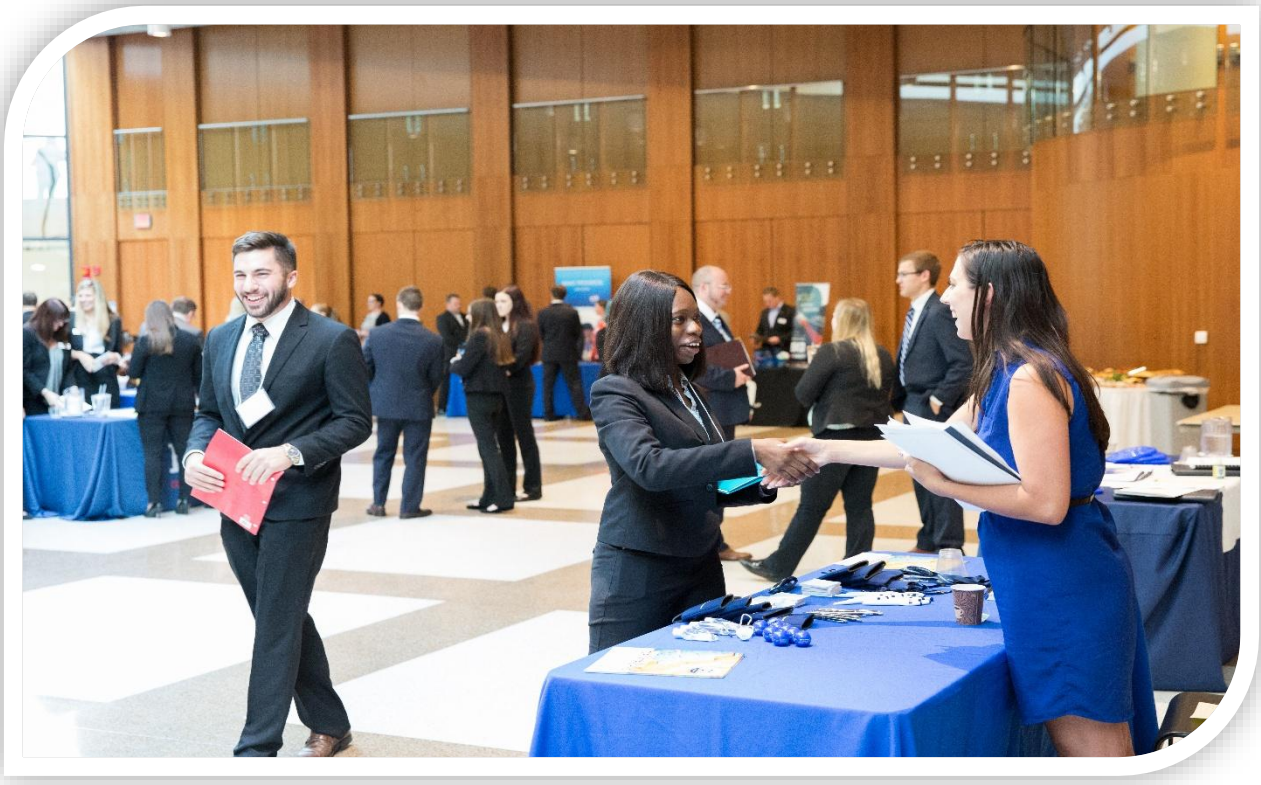
Analytics Career Fair 2025

Thursday, May 8th, 1:00pm – 4:00pm

Williams Center G138 Blue Lounge

This year the IBAC is introducing the Analytics Career Fair. The Career Fair is an opportunity for participants, particularly current students, to network with potential employers recruiting candidates in the analytics and data science fields. The Career Fair will run from 1:00 to 4:00 p.m. on Thursday in the Blue Lounge, a side room off of the Williams Center MPR.

Candidates are encouraged to bring resumes and dress professionally. This year, industries such as health care, education, finance, and logistics are represented, as well as graduate level programs in the field.



Best Paper Awards

To be announced at the conference during the closing remarks!

Fredonia School of Business

The Fredonia School of Business prepares future business leaders by providing the knowledge, skills, and real-world experience necessary to compete in a global business environment. We offer a wide range of business programs to prepare you for success in Accounting, Public Accountancy, Finance, Management, Marketing, Business Administration, Music Industry, Sport Management, and Economics. All programs in the School of Business will introduce you to the latest technology, make you aware of the global and cultural components of business, and provide you with experiential learning and practical internship opportunities. Our curriculum emphasizes critical thinking, communication skills, business ethics, and professionalism.

The School of Business sustains the tradition of excellence at Fredonia, which is consistently ranked among the finest public universities in the Northeast -- and among the most affordable options in higher education. Small class sizes lead to close interaction with our faculty and the opportunity to conduct research at the undergraduate level - a hallmark of a Fredonia education. In addition, all students have opportunities for internships, available locally, regionally and across the nation.

Our students have access to the Center for Innovation & Economic Development (CIED), which supports start-up companies committed to Western New York. The Center is a New York State certified business incubator operated by SUNY Fredonia. Formerly called the Fredonia Technology Incubator (FTI), the CIED provides entrepreneurs with access to work-ready space, business consulting, mentoring and training, professional services, assistance with business formation, networking opportunities, and connections to University resources and student interns. Students work with entrepreneurs on market research, business plan development, operations and record keeping, and unique problem-solving initiatives. The Center expands the entrepreneurial aspects of our curriculum, enhances internship and employment possibilities, and inspires students to start businesses of their own.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