Murtaza Nasir

Assistant Professor – Decision Science

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I. Education

PhD – Management Science **2022**
Manning School of Business, University of Massachusetts Lowell Lowell, MA

Master of Business Administration – Business Analytics Concentration **2018**
Beacom School of Business, University of South Dakota Vermillion, SD

Bachelor of Science – Engineering **2009**
Ghulam Ishaq Khan Institute of Engineering Sciences and Technology Topi, Pakistan

II. Research & Publications

Refereed Journal Articles

- Najjar, Mohammad; **Nasir, Murtaza**, "AI vs. AI: An AI-Enabled Conversational Intervention to Inoculate against AI-Generated Fake News", *Information Systems Frontiers* (2026). https://doi.org/10.1007/s10796-026-10827-y

- Najjar, Mohammad; **Nasir, Murtaza**, “Dialogue patterns in human–AI co-creation: How interaction structure shapes output and process”, *Human-Computer Interaction* (2026). https://doi.org/10.1080/07370024.2026.2717534

- **Nasir, Murtaza**; Summerfield, Nichalin S.; Carreiro, Stephanie; Berlowitz, Dan & Oztekin, Asil, "A machine learning approach for diagnostic and prognostic predictions, key risk factors and interactions", *Health Services and Outcomes Research Methodology* 25(1), 1-28 (2025).

- **Nasir, Murtaza**; Summerfield, Nichalin S.; Simsek, Serhat & Oztekin, Asil, "An interpretable machine learning methodology to generate interaction effect hypotheses from complex datasets", *Decision Sciences* (2024).

- **Nasir, Murtaza**; Dag, Ali; Simsek, Serhat; Ivanov, Anton & Oztekin, Asil, “Improving Imbalanced Machine Learning with Neighborhood-Informed Synthetic Sample Placement”, *Journal of Management Information Systems* 39.4: 1116-1145 (2022).

- Sheikh, Shaya; Rabiee, Meysam; **Nasir, Murtaza**; Oztekin, Asil, “An Integrated Decision Support System for Multi-Target Forecasting: A Case Study of Energy Load Prediction for a Solar-Powered Residential House.” *Computers & Industrial Engineering* (2022).

- **Nasir, Murtaza**; Simsek, Serhat; Cornelsen, Erin; Ragothaman, Srinivasan; & Dag, Ali. "Developing a decision support system to detect material weaknesses in internal control." *Decision Support Systems* (2021).

- **Nasir, Murtaza**, Summerfield, Nichalin; Oztekin, Asil; Knight, Margaret; Ackerson, Leland K. & Carreiro, Stephanie, "Machine learning–based outcome prediction and novel hypotheses generation for substance use disorder treatment." *Journal of the American Medical Informatics Association* (2021).

- **Nasir, Murtaza**; Summerfield, Nichalin; Dag, Ali & Oztekin, Asil, "A service analytic approach to studying patient no-shows" *Service Business* 14**,** 287–313 (2020).

- **Nasir, Murtaza**; Dag, Ali; Young, William & Delen, Dursun, "Determining Optimal Skillsets for Business Managers Based on Local and Global Job Markets: A Text Analytics Approach", *Decision Sciences Journal of Innovative Education* 18 (3), 374-408 (2020).

- **Nasir, Murtaza**; South-Winter, Carole; Ragothaman, Srinivasan & Dag, Ali, “A comparative data analytic approach to construct a risk trade-off for cardiac patients’ re-admissions”, *Industrial Management & Data Systems* 119 (1), 189-209 (2019).

Books & Instructional Materials

- **Nasir, Murtaza**, *Generative AI for Business Analytics: A Hands-On Practitioner's Guide*. Book manuscript: 28 chapters in ten parts with nine appendices, plus a companion code repository. Open web edition (2026): https://gaba.murtaza.cc. In preparation for submission to an academic publisher.

Research Software

- **SANSA** — R package implementing the synthetic-sampling algorithm of the *Journal of Management Information Systems* (2022) article. Published on CRAN (2022), GPL-3: https://cran.r-project.org/package=sansa

- **MAESTRO** — open-source multi-agent research-synthesis platform implementing the WRITER framework (AGPL-3.0); 1,492 GitHub stars and 145 forks as of September 2026: https://github.com/murtaza-nasir/maestro

- **Speakr, pdf3md, and other open-source applications** — self-hosted transcription and PDF-to-Markdown tools released under free licenses; more than 5,700 GitHub stars

across all repositories and more than 400,000 Docker Hub downloads (September 2026): https://github.com/murtaza-nasir

Academic Conference Proceedings & Presentations

- Muthitacharoen, Achita; Mirsadikov, Akmal; **Nasir, Murtaza** & Beach, Tyler, "The Evolution of Educators' Responses to Academic Integrity Challenges in the Generative AI Era: Evidence from Anonymized Social Media Posts", *Decision Sciences Institute 57th Annual Conference*, San Francisco, CA, November 22nd, 2026 (accepted; scheduled).

- Najjar, Mohammad & **Nasir, Murtaza**, "Beyond a Single Judge: Mapping the LLM-as-Judge Design Space for Creativity Assessment in Human-AI Co-Creation", *Hawaii International Conference on System Sciences (HICSS-60)*, conditionally accepted (2026).

- **Nasir, Murtaza** & Nguyen, Bich, "AVALON: An Agentic, Knowledge Graph-Powered Methodology for Research Verification", *Presentation at the INFORMS Annual Meeting*, Atlanta, GA, October 26th, 2025.

- **Nasir, Murtaza**; Ivanov, Anton; Tacheva, Jasmina, "Navigating the Communication Divide: Using Large Language Models for Enhanced Patient-Provider Interaction in Opioid Disorder Treatment", *2024 INFORMS Annual Meeting*, Invited Session on Artificial Intelligence and Big Data Applications in Global Operations and Management, October 22, 2024, Seattle, WA.

- **Nasir, Murtaza**; Summerfield, Nichalin; Simsek, Serhat & Oztekin, Asil, "Simple Interaction Finding Technique (SIFT): A Novel Hypothesis Generation Methodology with Machine Learning", *Presentation in the Regional Best Paper Competition Session, DSI 52nd Annual Meeting*, online, Nov. 18th 2021.

- **Nasir, Murtaza**; Summerfield, Nichalin; Simsek, Serhat & Oztekin, Asil, "Simple Interaction Finding Technique (SIFT): A Novel Hypothesis Generation Methodology with Machine Learning", *Presentation at the INFORMS Annual Meeting*, Anaheim, CA., Oct. 22nd- Oct 27th 2021.

- **Nasir, Murtaza**; Summerfield, Nichalin; Simsek, Serhat & Oztekin, Asil, "Simple Interaction Finding Technique (SIFT): A Novel Hypothesis Generation Methodology with Machine Learning", *Presentation at the 50th NEDSI Annual Conference*, Cambridge, MA., Mar. 26th- Mar 28th 2021.

- **Nasir, Murtaza**, Dag, Ali; Simsek, Serhat & Oztekin, Asil, "Synthetic Average Neighborhood Sampling Algorithm (SANSA): A Neighborhood Informed Synthetic Sample Placement Approach to Improve Learning from Imbalanced Data", *Presentation in the Rule & Analytics Design Session, DSI 51st Annual Meeting*, online, Nov. 23rd 2020.

- **Nasir, Murtaza**; Summerfield, Nichalin; Oztekin, Asil; Knight, Margaret & Ackerson, Leland, "Machine Learning Based Outcome Prediction & Hypothesis Generation for Substance Use Disorder Treatment", *Presentation in the Data Analytics in Healthcare Session, DSI 51st Annual Meeting*, online, Nov. 21st 2020.

- **Nasir, Murtaza**, Dag, Ali; Simsek, Serhat & Oztekin, Asil, "Synthetic Average Neighborhood Sampling Algorithm (SANSA): A Neighborhood Informed Synthetic Sample Placement Approach to Improve Learning from Imbalanced Data", *Presentation in the Anomaly Detection/Data Reliability Session, INFORMS Annual Meeting*, online, Nov. 7th 2020.

- **Nasir, Murtaza**; Summerfield, Nichalin; Oztekin, Asil; Knight, Margaret & Ackerson, Leland, "Machine Learning Based Outcome Prediction & Hypothesis Generation for Substance Use Disorder Treatment", *Presentation in the Healthcare Analytics Session, INFORMS Annual Meeting*, online, Nov. 7th 2020.

- **Nasir, Murtaza**, Dag, Ali; Simsek, Serhat & Oztekin, Asil, "Synthetic Average Neighborhood Sampling Algorithm (SANSA): A Neighborhood Informed Synthetic Sample Placement Approach to Improve Learning from Imbalanced Data", *Presentation at the 49th NEDSI Annual Conference*, Cambridge, MA., Mar. 26th- Mar 28th 2020.

- **Nasir, Murtaza**; Summerfield, Nichalin; Oztekin, Asil; Knight, Margaret & Ackerson, Leland, "Machine Learning Based Outcome Prediction & Hypothesis Generation for Substance Use Disorder Treatment", *Presentation at the 49th NEDSI Annual Conference*, Cambridge, MA., Mar. 26th- Mar 28th 2020.

- **Nasir, Murtaza**, Dag, Ali; Simsek, Serhat & Oztekin, Asil, "Synthetic Average Neighborhood Sampling Algorithm (SANSA): A Neighborhood Informed Synthetic Sample Placement Approach to Improve Learning from Imbalanced Data", *Presentation at the INFORMS Annual Meeting*, Seattle, WA., Oct. 20th- Oct 23rd 2019.

- **Nasir, Murtaza**, Dag, Ali, Young, William & Delen, Dursun, "Business Analytics in the Managerial Job Market", *Presentation at the INFORMS Annual Meeting Data Mining and Decision Analytics Workshop*, Phoenix, AZ., Nov. 3rd- Nov 7th 2018.

III. Awards & Honors

- **2025 W. Frank Barton School of Business Graduate Teacher of the Year Award**

- **Finalist for the Regional Best Paper Award at the Decision Sciences Institute (DSI) Conference 2021**
  Nasir, Murtaza; Summerfield, Nichalin; Simsek, Serhat & Oztekin, Asil, "Simple

Interaction Finding Technique (SIFT): A Novel Hypothesis Generation Methodology with Machine Learning", *DSI 52nd Annual Meeting*, online, Nov. 18th 2021.

- **Best PhD Student Paper Award @ Northeast Decision Sciences Institute (NEDSI) 2021 Conference**
  Nasir, Murtaza; Summerfield, Nichalin; Simsek, Serhat & Oztekin, Asil, "Simple Interaction Finding Technique (SIFT): A Novel Hypothesis Generation Methodology with Machine Learning". *Paper submission at the 50th NEDSI Annual Conference*, Cambridge, MA., Mar. 26th- Mar 28th 2021.

- **Best Application of Theory Award @ Northeast Decision Sciences Institute (NEDSI) 2021 Conference**
  Nasir, Murtaza; Summerfield, Nichalin; Simsek, Serhat & Oztekin, Asil, "Simple Interaction Finding Technique (SIFT): A Novel Hypothesis Generation Methodology with Machine Learning". *Paper submission at the 50th NEDSI Annual Conference*, Cambridge, MA., Mar. 26th- Mar 28th 2021.

- **Regional Best Paper Award at the Decision Sciences Institute (DSI) Conference 2020**
  Nasir, Murtaza, Dag, Ali; Simsek, Serhat; & Oztekin, Asil, "Synthetic Average Neighborhood Sampling Algorithm (SANSA): A Neighborhood Informed Synthetic Sample Placement Approach to Improve Learning from Imbalanced Data", *51st Annual (Virtual) DSI Conference*, November 21-23, 2020.

- **Finalist in the Best General Paper Competition at the Data Mining Section @ INFORMS Annual Meeting 2020**
  Nasir, Murtaza, Dag, Ali; Simsek, Serhat; & Oztekin, Asil, "Synthetic Average Neighborhood Sampling Algorithm (SANSA): A Neighborhood Informed Synthetic Sample Placement Approach to Improve Learning from Imbalanced Data", *INFORMS Annual (Virtual) Meeting*, November 7th, 2020.

- **Two Silver Medals and One Bronze Medal Recipient at the Veterans Health Administration (VHA) Innovation Ecosystem and Food & Drug Administration (FDA) COVID-19 Risk Factor Modeling Challenge:**
  Using machine learning with patient medical history data, achieved the 2nd place for predicting COVID-19 deaths and the 3rd place for predicting hospitalization stay duration for COVID-19, in a competition organized by the FDA & VHA that drew 34 submissions from 21 teams, August 2020.

- **Best Overall Conference Paper Award @ Northeast Decision Sciences Institute (NEDSI) 2020 Conference**
  Nasir, Murtaza, et al, "Synthetic Average Neighborhood Sampling Algorithm (SANSA): A Neighborhood Informed Synthetic Sample Placement Approach to Improve

Learning from Imbalanced Data", *Paper submission at the 49th NEDSI Annual Conference*, Cambridge, MA., Mar. 26th- Mar 28th 2020.

- **Best Contribution to Theory Award @ Northeast Decision Sciences Institute (NEDSI) 2020 Conference**
  Nasir, Murtaza, et al, "Synthetic Average Neighborhood Sampling Algorithm (SANSA): A Neighborhood Informed Synthetic Sample Placement Approach to Improve Learning from Imbalanced Data", *Paper submission at the 49th NEDSI Annual Conference*, Cambridge, MA., Mar. 26th- Mar 28th 2020.

IV. Presentations & Talks

Invited Talks

- **Bentley University Data Analytics Research Team (DART) Center Meeting**
  Waltham, MA, April 14th, 2020
  Machine Learning Based Outcome Prediction & Hypothesis Generation for Substance Use Disorder Treatment

- **Tufts Analytics Without Borders Conference**
  Boston, MA, February 28th, 2020
  Synthetic Average Neighborhood Sampling Algorithm (SANSA): A Neighborhood Informed Synthetic Sample Placement Approach to Improve Learning from Imbalanced Data

Campus Talks

- **WSU Faculty/Staff Club, Wichita State University**
  Wichita, KS, April 28th, 2026
  AI for Everyday Life: Enhancing Personal and Professional Productivity (Invited TED-style Talk, representing the Barton School)

- **NIAR Manufacturing Day, National Institute for Aviation Research, Wichita State University**
  Wichita, KS, October 23rd, 2025
  Impact of AI in Manufacturing (A.I. Panel)

- **Barton School of Business**
  Wichita, KS, November 15th, 2023
  The Transformative Potential of Generative AI

- **The Academic Resources Conference, Wichita State University**
  Wichita, KS, August 14th, 2023
  Panel – Generative AI in the Classroom

- **UMass Med School, Center for Data Driven Discovery in Healthcare and Center for Clinical & Translational Science**
  Worcester, MA, April 24th, 2020
  Machine Learning Based Outcome Prediction & Hypothesis Generation for Substance Use Disorder Treatment

- **UMass Lowell, Department of Public Health**
  Lowell, MA, April 2nd, 2020
  Machine Learning Based Outcome Prediction & Hypothesis Generation for Substance Use Disorder Treatment

- **UMass Medical School, Population and Quantitative Health Sciences Meeting**
  Worcester, MA, March 23rd, 2020
  Machine Learning Based Outcome Prediction & Hypothesis Generation for Substance Use Disorder Treatment

- **UMass Lowell, Center for Population Health Meeting**
  Lowell, MA, March 17th, 2020
  Machine Learning Based Outcome Prediction & Hypothesis Generation for Substance Use Disorder Treatment

V. Professional Associations

- The Institute for Operations Research and the Management Sciences (INFORMS) – Member
- Decision Sciences Institute (DSI) – Member
- Pakistan Engineering Council (PEC) – Member

VI. Professional Development

Peer Reviews (14 journals, 2018–2026)

- Management Science
- Journal of Management Information Systems
- Journal of the Association for Information Systems
- Decision Support Systems
- European Journal of Operational Research
- International Journal of Forecasting
- Journal of the Operational Research Society
- Annals of Operations Research
- International Journal of Electronic Commerce
- Information Processing & Management
- e-Service Journal
- Journal of Modelling in Management
- Scientific Reports
- Applied Operations & Analytics

Conference Session Chairpersonship

- Chaired the IT/IS Track session on AI-Enhanced Decision-Making at the 2024 Decision Sciences Institute (DSI) Annual Conference, Phoenix, AZ
- Chaired Session titled "Leveraging Advanced Analytics and AI for Enhanced Decision-Making in Complex Environments" at the 2024 INFORMS Annual Meeting
- Chaired the Healthcare Analytics Session at the 2020 INFORMS Annual Meeting
- Chaired the Healthcare Analytics Session for the DM&DA Workshop at the 2018 INFORMS Annual Meeting
- Chaired the Business Analytics General Session for the DM&DA Workshop at the 2018 INFORMS Annual Meeting

VII. Service

University & College Service

- Barton School AI Task Force — member (2024–2025)
- Dean's AI Foresight advisory group — member; advising the Dean on the school's AI strategy and on emerging AI developments (2025–present)
- Faculty Advisor, WSU AI Club — registered student organization under the Dean's Office (2026–present)
- Barton AI Transformation Workshops — co-lead; designed and delivered hands-on AI training for Barton faculty (2023–2024)
- Assurance of Learning (AOL) committee — program-level learning assessment (2023–present)
- Faculty Support Committee (URCA/MURPA proposal review) — substitute member for one semester (2023)
- AI Research Focus Group, WSU AI Strategy Council research working group — member (2026–present)
- Faculty Advisor, NIAR Center for AI Security, Evaluations, Control and Cooperation (AI-SECC) (Feb 2025–present)
- Guest lectures on AI in Barton courses — Spero career-readiness program and first-year and HRM classes (2024–present)
- Course-equivalency (TES) representative for Business Analytics (2023–present)
- University student recruitment events (2024–2025)

Department Service (Finance, Real Estate & Decision Sciences)

- MSBA Program Review — lead; led the Business Analytics program review and prepared the review documents (2023)
- Faculty search committees — FREDS faculty search (2022); two departmental searches (2023), including the Business Analytics search that concluded in 2024
- Business Analytics “BLOOM” strategic plan and undergraduate program proposal (2024)
- AI curriculum development — lead; proposals for an AI minor, an AI emphasis, an MBA AI track, AI micro-credentials, and the MIS rebranding to include analytics and AI (2024–2025)

Community & Outreach

- Guest speaker, ISM-Wichita annual workshop (2024)

VIII. Technical Skills

Computer Languages: Experienced in R, Python, PHP, SQL, JavaScript, C++, G-CODE

Software: MS Office, Linux (CentOS & RHEL), Adobe Photoshop & Illustrator, SolidWorks, CamWorks

IX. Professional Experience

Assistant Professor (Decision Science) **2022 – present**
W. Frank Barton School of Business, Wichita State University Wichita, KS

- **Courses Taught**
  - BSAN 885: Business Analytics Capstone / Analytics with Advanced AI; Fall 2024 – Spring 2026
  - BSAN 875: Advanced Business Analytics / Prescriptive Analytics; 2023–2026
  - BSAN 775: Intro to Business Analytics; Fall 2022, Spring & Fall 2023, Spring 2024
  - BSAN 675: Analytics Modeling with Spreadsheets; Fall 2022, Fall 2023
  - FIN 891: Directed Study (graduate); Fall 2023

PhD Candidate **2019 – 2022**
Manning School of Business, University of Massachusetts Lowell Lowell, MA

- **Courses Taught**
  - POMS 3050: Operations Management, Summer 2022
  - POMS 4050: Predictive Data Analytics, Spring 2022
  - POMS 2010: Intro to Business Analytics, Summer & Fall 2021
- Served as teaching assistant where duties included grading papers, maintaining grades and student feedback on the online learning management system and invigilation. Classes include:
  - POMS 2010: Intro to Business Analytics; Spring & Fall 2020, Spring 2021
  - POMS 3010: Operations Management; Fall 2019, Spring 2020, Spring 2021
  - POMS 4050: Predictive Data Analytics, Spring 2021
  - POMS 6220: Decision Analytics, Fall 2020

Graduate Research Assistant **2016 – 2019**
Beacom School of Business, University of South Dakota Vermillion, SD

- Worked with the Governor's Office of Economic Development and the SDBCA to help South Dakota scientists and entrepreneurs take their inventions to market
- Provided support and advice to program participants about business planning, operations management, market research and marketing activities
- Managed and advised a group of undergraduate students working with the various participants

Managing Director **2012 – 2015**
Aureus Engineering Islamabad, Pakistan

- Created an engineered wood products business that manufactured to order and customized engineered woodwork projects and wall panels
- Gained experience in project management, CNC manufacturing (CAD/CAM design), online and offline marketing (Facebook, Google Adwords), procurement and logistics among many other business aspects

Research Consultant **2011**
Rastgar Engineering Company Islamabad, Pakistan

- Increased sales for various company products and services through market penetration and market development strategies
- Led the marketing and sales activities for new product categories like heavy duty articulated trucks and machinery
- Streamlined sales and technical teams work processes leading to more efficient quoting and technical presentations, increasing conversions

Manager Operations **2009 – 2010**
Trans Tech Group Islamabad, Pakistan

- Part of a two-member team that developed a strategic business plan for the new venture, Trans Food Industries
- Designed and implemented SOPs and FSMS for the factory; led through successful ISO certification audits
- Oversaw factory operations, supply chain and production
- Pitched and negotiated CDM deals with foreign CDM firms, buyers and carbon funds for the groups Solar Energy Projects
- Led a team to implement CRM and ERP solutions for efficient operations across all company offices