

John T. Fields

Assistant Professor of Business Analytics | *AI Researcher* | *Ph.D. Candidate*
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PROFESSIONAL APPOINTMENTS

Assistant Professor of Business Analytics · Concordia University Wisconsin *2020 – Present*

- Teach undergraduate and graduate courses in business analytics, data science, and applied machine learning.
- Lead curriculum development and student research mentorship in the School of Business and Legal Studies.

Co-Founder, AI & Quantum Innovation Lab · Concordia University Wisconsin *2025 – Present*

- Co-founded interdisciplinary lab advancing applied AI and quantum computing research in a faith-informed academic context.
- Direct student and faculty research projects spanning privacy-preserving ML, NLP, and edge AI.

Data Scientist · Talent Select AI (formerly HarQen LLC) *2019 – 2023*

- Built and deployed NLP and machine learning models for talent assessment and selection applications.
- Contributed to product development of AI-driven hiring tools used by enterprise clients.

Director, Global Customer Data · Rockwell Automation *2013 – 2018*

- Led enterprise customer master data strategy and information governance across global operations.
- Received SAP IGgie Award (2015) for excellence in information governance.

Director, Market-to-Quote Processes · Rockwell Automation *2008 – 2012*

- Directed go-to-market process design and integration across sales operations.

Manager, Channel Operations · Rockwell Automation *2004 – 2007*

- Managed distribution channel operations and partner programs across North American markets.

EDUCATION

Ph.D. Candidate, Computer Science · Marquette University *Expected Fall 2026*

- Supporting Areas: Natural Language Processing, Educational Data Mining, Privacy-Preserving Machine Learning

M.S., Applied Data Science · Syracuse University *2020*

- GPA: 3.9

B.S., Industrial Distribution · Texas A&M University

ACTIVE RESEARCH

Privacy-Preserving Machine Learning for Student Retention

NSF NAIRR Grant (NAIRR240195, 2024 – 2025)

- Developed privacy-preserving ML models using federated learning and secure multi-party computation for collaborative cross-institutional student-retention modeling while maintaining FERPA compliance.
- Project completed October 2025.

Pi TPM Edge

- Trusted Platform Module deployment on Raspberry Pi hardware for secure edge AI and federated learning, exploring hardware-rooted trust for distributed inference.

PATENTS

- **U.S. Patent Application 62/935,928** — Machine learning and text-mining methodology for higher-education admissions decisioning.

PUBLICATIONS

Journal Articles

- Fields, J., Chovanec, K., & Madiraju, P. (2024). *A Survey of Text Classification With Transformers: How Wide? How Large? How Long? How Accurate? How Expensive? How Safe?* IEEE Access, 12, 6518–6531. (211 citations)

Conference Proceedings

- Chovanec, K., Fields, J., & Madiraju, P. (2025). *Explaining Pretrained Language Models in the Context of Higher Education*. IEEE International Conference on Big Data (BigData) 2025.
- Fields, J., Chovanec, K., & Madiraju, P. (2024). *Integrating Categorical and Continuous Data in a Cluster-Then-Classify Methodology for Predicting Undergraduate Student Success*. IEEE International Conference on Big Data (BigData), 8118–8126.
- Chovanec, K., Fields, J., & Madiraju, P. (2023). *Combining Demographic Tabular Data with BERT Outputs for Multilabel Text Classification in Higher Education Survey Data*. IEEE International Conference on Big Data (BigData), 1403–1409.

Working Papers and Preprints

- Fields, J., Islam, KM., Thota, R., Chen, V., & Madiraju, P. (2025). *A Privacy-Preserving Framework for Cross-Institutional Collaboration on Student Retention Prediction Using Remote Data Science*.
- Islam, KM. Sajjadul, Fields, J., & Madiraju, P. (2025). *multiMentalRoBERTa: A Fine-tuned Multiclass Classifier for Mental Health Disorder*. arXiv:2511.04698.

AWARDS & HONORS

- **Undergraduate Business Faculty of the Year** — Concordia University Wisconsin (2026)
- **Award for Integration of Faith and Learning** — Concordia University Wisconsin (2024)
- **Undergraduate Business Faculty of the Year** — Concordia University Wisconsin (2024)
- **SAP IGgie Award for Information Governance** — Rockwell Automation (2015)

INVITED TALKS & PANELS

- **Panel with Dr. Richard Marks (Baylor University)** — Inspire & Ignite Conference, Mackinac Island (2024)

- **The Future of Text Classification Beyond ChatGPT** — 2024
- **Beyond Shaming in the Algorithmic Fairness Debate** — 2024
- **IEEE International Conference on Big Data** — Sorrento, Italy (2023)

UNIVERSITY SERVICE

- **AI Committee** (2025 – Present)
- **Faculty Student Retention Committee** (2023 – 2024)
- **Faculty Advisor, Business Analytics** (2020 – Present)
- **Predictive Analysis Committee** (2021 – 2023)

PROFESSIONAL MEMBERSHIPS

- IEEE (2023 – Present)
- ACM (2021 – Present)
- The Veritas Forum (2020 – Present)