

Yu (Adam) Ding

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OBJECTIVE

Ph.D. in Industrial and Systems Engineering with a focus on machine learning methodology for healthcare data analysis and policy planning. My recent research involves designing machine learning models and optimization algorithms for cancer treatment using cancer genomics, as well as enhancing healthcare operations management and patient treatment planning.

PROFESSIONAL EXPERIENCE

- **The University of Texas MD Anderson Cancer Center** Sep 2024 - Present, Houston, Texas
Postdoctoral Research Fellow Supervisor: Dr. [Wenyi Wang](#)
- **The University of Kansas School of Business** May 2019 - Jul 2020, Lawrence, Kansas
Research Assistant in Operations Management

EDUCATION

- **Ph.D. in Industrial and Systems Engineering at Binghamton University** Aug 2020 - Aug 2024, Vestal, New York
Machine learning for Healthcare Advisor: Dr. [Bing Si](#)
- **M.S. in Industrial Engineering at Wayne State University** Aug 2017 - Apr 2019, Detroit, Michigan
Machine learning for Reliability
- **B.S. in Geophysics at University of Science and Technology of China** Aug 2013 - Jun 2017, Anhui, China
Quantitative methods in Solid Geophysics

PUBLICATIONS

J: JOURNAL, T: THESIS, *: CORRESPONDING AUTHOR

- [J.6] Ding, Y., Somers, V., Si, B.* (2024). **A novel sparse generalized structural equation modeling with structured sparsity for subgroup discovery from multi-modal mixed-type data.** *IIE Transactions*, 1–22. DOI: 10.1080/24725854.2024.2445776
- [T.1] Ding, Y. (2024). **Statistical Machine Learning and Data Fusion Methodologies: Applications in Healthcare.** Binghamton University.
- [J.5] Sutherland, M. A.*, Hutchinson, M. K., Si, B., Ding, Y., Liebermann, E., Connolly, S. L., ... Mueller, S. D. (2024). **Health screenings in college health centers: Variations in practice.** *Journal of American College Health*, 1-8. DOI: 10.1080/07448481.2024.2361307
- [J.4] Mueller, S. D. *, Sutherland, M. A., Hutchinson, M. K., Si, B., Ding, Y., Connolly, S. L. (2024). **Student Health Services at Historically Black Colleges and Universities and Predominantly Black Institutions in the United States.** *Health Equity*, Vol. 8, Issue 1, pp. 226-234. DOI: 10.1089/heq.2023.0219
- [J.3] Alramadeen, W., Ding, Y., Costa, C., Si, B. * (2023). **A novel sparse linear mixed model for multi-source mixed-frequency data fusion in telemedicine.** *IIE Transactions on Healthcare Systems Engineering*, Vol. 13, Issue 3, pp. 215-225. DOI: 10.1080/24725579.2023.2202877; **Selected as a Feature Article by the ISE Magazine**
- [J.2] Jiang, L., Ding, Y., Sutherland, M. A., Hutchinson, M. K., Zhang, C., Si, B. * (2022). **A novel sparse model-based algorithm to cluster categorical data for improved health screening and public health promotion.** *IIE Transactions on Healthcare Systems Engineering*, Vol. 12, Issue 2, pp. 137-149. DOI: 10.1080/24725579.2021.1980467
- [J.1] Ding, Y., Yang, Q.*, King, C. B., Hong, Y. (2019). **A general accelerated destructive degradation testing model for reliability analysis.** *IEEE Transactions on Reliability*, Vol. 68, Issue 4, pp. 1272-1282. DOI: 10.1109/TR.2018.2883983

MANUSCRIPTS


M: MANUSCRIPT, *: CORRESPONDING AUTHOR

- [M.4] Ding, Y., Costa, C., Si, B.* (2025). **Federated function-on-function regression with an efficient gradient boosting algorithm for privacy-preserving telemedicine.** Manuscript minor revision *IEEE Transactions on Automation Science and Engineering*; **Selected as QCRE Best Student Paper Competition Finalist, IIEE Montreal, 2024** 
- [M.3] Mueller, S.*, Ding, Y., Si, B., Sutherland, M., Hutchinson, K. (2025). **Access to Campus Health Services at MSI and Non-MSI Colleges and Universities in the U.S..** Manuscript submitted for publication in *Nursing Research*
- [M.2] Ding, Y., Costa, C., Si, B.* (2025). **Vertical Federated Learning of Gradient Boosting for Functional Regression with Differential Privacy.** Manuscript submitted for publication in *IEEE Transactions on Privacy*
- [M.1] Ding, Y., Si, W.* (2025). **Multi-System Conditional-Based Maintenance Planning with Social Equity.** Manuscript ready to submit *Management Science*


HONORS AND AWARDS

- **Warren Alpert Computational Biology and AI Network Fellow** Aug 2025
UCLA Computational Genomics Summer Institute
- **Best Team Award in James P. Allison Institute and IDSO Hackathon 2025** Apr 2025
James P. Allison Institute and Institute for Data Science in Oncology
- **QCRE Best Student Paper Competition Finalist** May 2024
Institute of Industrial and Systems Engineers Annual Conference & Expo
- **National Science Foundation (NSF) Travel Awards** May 2024
The University of Arizona
- **Watson Professional Development Fund** Apr 2024
State University of New York Binghamton
- **Summer Research Fellowship** Apr 2020
The University of Kansas
- **University Graduate Fellowship** Aug 2019
The University of Kansas
- **Graduate Fellowship** Aug 2018
Wayne State University
- **National Encouragement Scholarship** Aug 2016
University of Science and Technology of China
- **Kansas Half Marathon Finisher Price** Oct 2019
Kansas Half Marathon

CONFERENCE PRESENTATION AND INVITED TALKS

- **Federated function-on-function regression with an efficient gradient boosting algorithm for privacy-preserving telemedicine**, Department of Radiation Oncology, Mayo Clinic Arizona, Phoenix AZ, July 1st, 2024
- **Federated function-on-function regression with an efficient gradient boosting algorithm for privacy-preserving telemedicine**, IISE Conference, Montreal Canada, May 18th, 2024 

TEACHING EXPERIENCE

- **Guest Lecturer at Rice University** Spring 2025
give lectures on selected topics and reviews, prepare exam questions and manage proctoring, and hold office hours and email Q&A 
 - Statistics 623-423 Probability in Bioinformatics and Genetics
- **Guest Lecturer at Binghamton University** Spring 2024
develop course materials, give twelve lectures, host review sessions, and email Q&A
 - SSIE 548: Healthcare Data Sci & Analytics (graduate class)
 - ISE 448: Healthcare Data Sci & Analytics (undergraduate class)
 - Teaching Evaluation Score: 4.5/5.0
- **Teaching Assistant at Wayne State University** Spring 2018
give lectures on selected topics and reviews, prepare exam questions and manage proctoring, and hold office hours and email Q&A
 - IE 6430 Computer Simulation Methods (graduate class)
- **Teaching Assistant at Wayne State University** Fall 2017
give lectures on selected topics and reviews, prepare exam questions and manage proctoring, and hold office hours and email Q&A
 - IE 7270 Reliability Estimation (graduate class)

GRANT WRITING EXPERIENCE

- **Helped Ph.D. advisor Dr. Bing Si to prepare and conduct the following grants funded by NIH and industry**
Binghamton University
 - NIH/NHLBI, "R01HL168173: Sleep and Cardiometabolic Subgroup Discovery and Risk Prediction in United States Adolescents and Young Adults". Amount: \$2,452,065
 - NIH/NHLBI, "R21HL161765: Towards Precise Phenotype Discovery of Obstructive Sleep Apnea with a Data-Inclusive Multi-Study Analysis". Amount: \$242,770
 - SUNY-IBM AI Research Alliance, "Ray-F2R-FL: Ray-based Functional Regression with Federated Learning". Amount: \$200,000
- **Summer Research Fellowship**
The University of Kansas
 - Independently wrote a proposal for a Student-Led Research Grant. Amount: \$5,000






PROFESSIONAL MEMBERSHIPS

- **Institute of Industrial and Systems Engineers (IISE)**
- **Institute for Operations Research and the Management Sciences (INFORMS)**
- **Institute of Electrical and Electronics Engineers (IEEE)**

PROFESSIONAL SERVICE

- Journal reviewer of IEEE Transactions on Medical Imaging
- Journal reviewer of IISE Transactions on Healthcare Systems Engineering
- Lab Manager of Microstructure Manufacturing Lab, Wayne State University
- Seminar Organizer and Volunteer, Wayne State University

ADDITIONAL INFORMATION

Programming languages and Tools:  Python, C/C++, ,  Java,  LaTeX,  Mysql, CUDA

Last Update: 08/2025