

Lucas J. Wiese

lwiese@purdue.edu

lucaswiese.com

Department of Computer & Information Technology
Purdue University

EDUCATION

Ph.D. in Technology

Purdue University, Polytechnic Institute

Co-advisors: Dr. Alejandra J. Magana, Dr. Daniel S. Schiff

expected **May 2027**

M.S. in Computer & Information Technology

Purdue University, Polytechnic Institute

Co-advisors: Dr. Alejandra J. Magana, Dr. Daniel S. Schiff

expected **Dec 2024**

Bachelor of Science, Cybersecurity

Purdue University, Polytechnic Institute

May 2022

Bachelor of Arts, Philosophy

Purdue University, College of Liberal Arts

Certificate, Cornerstone

Purdue University, College of Liberal Arts

RESEARCH

INTERESTS

- Societal implications of artificial intelligence
- AI literacy and educational initiatives for ethical and responsible AI
- Modeling ethical decision-making about AI technology in the workforce

PUBLICATIONS

Wiese, L. J., Will Pinto, H. E., & Magana, A. J. (2024). Undergraduate and graduate students' conceptual understanding of model classification outcomes under the lens of scientific argumentation. *Computer Applications in Engineering Education*. 10.1002/cae.22734.

Wiese, L. J., Magana, A. J. (2024). Teaching Applied Ethics to Students by Encouraging Intuitive Reflection and Deliberate Discourse. In *2024 ASEE Annual Conference & Exposition*.

Wiese, L. J., Magana, A. J. (2024). A Syllabi Review of ChatGPT in the Classroom Prior to University-standard Guidance. In *2024 ASEE Annual Conference & Exposition*.

Kim, E., **Wiese, L.**, Will, H., Magana, A., & Jun, M. (2023). An Experiential Learning Approach to Industrial IoT Implementation of Smart Manufacturing through Coursework and University-Industry Partnerships. *Journal of Engineering Technology*. 40(2), 8-18.

Liu, X., Castellanos, H., **Wiese, L. J.**, Magana, A. J. (2023). Exploring Machine Learning Methods to Identify Patterns in Students' Solutions to Programming Assignments. In *2023 IEEE Frontiers in Education Conference (FIE)*.

Fiock, T., Mohn, J., Mack, J., Mousoulis, C., Kim, E., **Wiese, L.**, Jun, M., Magana, A., & Shakouri, A. (2023). Data Analytics Short Courses for Reskilling and Upskilling Indiana's Manufacturing Workforce. In *2023 ASEE Annual Conference & Exposition*.

Wiese, L. J., Schiff, D. S., & Magana, A. J. (extended abstract, 2023). Being

Proactive for Responsible AI: Analyzing Multiple Sectors for Innovation via Systematic Literature Review. In *IEEE Ethics-2023 Proceedings*.

Wasielowski, W. W., **Wiese, L. J.** (copyeditor) (May 2022). *Man, Death, Ethics*. Ridero. (*not peer reviewed*).

WORKING PAPERS

Wiese, L. J., Patil, I., Schiff, D. S., & Magana, A. J. (2024) AI Ethics Education: A Systematic Literature Review. Journal Article. *Under Review*.

Wiese, L. J. & Schiff, D. S. (2024) AI Ethics Education Is Not About AI Ethics: Centering Students, Not Topics. Book Chapter. *Under Review*.

Wiese, L. J., Magana, A. J., El Breidi, K., & Shakouri, A. (2024). Factors that Promote and Inhibit Advanced Technology Adoption in Small and Medium Manufacturing Firms. Journal Article. *Under Review*.

GRANTS AND AWARDS

Dean's Graduate Student Travel Grant. Purdue Polytechnic Institute. 2024. **\$300**.

Computer and Information Technology Graduate Student Travel Grant. Purdue Polytechnic Institute. 2024. **\$250**.

Purdue Office of the Provost, Innovation Hub No. IH-IG-24007. "Applied Ethics in AI within the Context of Cybersecurity Education". Lead Researcher and Instructional Designer. 2024. **\$40,000**.

Purdue Office of Research, Seed Funding for High-Impact Review Papers. "Foundations and Cracks in Achieving Ethical Action Through AI Education: A Systematic Literature Review". Lead Researcher. 2024. **\$10,000**.

Best Paper award for *exploring the impact of science and technology on society and culture*. Purdue's 2023 Literary Awards Contest. "Reframing Ethics for Societal Change: Opening Ethics to Deploy Ethical Reasoning". 2023. **\$100**

Best Paper award for *2023 American Society for Engineering Education conference, Manufacturing Division*. "An Experiential Learning Approach to Industrial IoT Implementation of Smart Manufacturing through Coursework and University-Industry Partnerships". Second author. 2023.

Purdue Office of Undergraduate Researcher Scholarship. "Needs Assessment on the Mental Health and Well-being of Digital Forensics Investigators and Examiners in Law Enforcement." 2020. **\$500**.

PRESENTATIONS **talk** Reframing Ethical Action in AI Education: An Exploratory Study for Discourse as a Measure and Method. At *2024 Society for Ethics Across the Curriculum*. Clemson, SC (October 4, 2024)

talk Teaching Applied Ethics to Students by Encouraging Intuitive Reflection and Deliberate Discourse. At *2024 ASEE Annual Conference & Exposition*. Portland, OR (June 26, 2024).

talk A Syllabi Review of ChatGPT in the Classroom Prior to University-standard Guidance. At *2024 ASEE Annual Conference & Exposition*. Portland, OR (June 24, 2024).

poster Defending Ethics Positions in Professional AI dilemmas: Students and a Pedagogical Framework. At *Purdue RIA Future of Work and Learning Spring 2024 Student Poster Symposium*. West Lafayette, IN (April 18, 2024).

talk Applied Ethics Goes Deeper Than Ethics-in-Practice: A Framework for Ethics Education and Action. At *2024 Association for Practical and Professional Ethics conference*. Cincinnati, OH (Feb 24, 2024).

poster An Experiential Learning Approach to Industrial IoT Implementation of Smart Manufacturing through Coursework and University-Industry Partnerships. At *2023 ASEE Annual Conference & Exposition*. Baltimore, MD (June 26, 2023).

poster Data Analytics Short Courses for Reskilling and Upskilling Indiana's Manufacturing Workforce. At *2023 ASEE Annual Conference & Exposition*. Baltimore, MD (June 26, 2023).

poster An Experiential Learning Approach to Industrial IoT Implementation of Smart Manufacturing through Coursework and University-Industry Partnerships. At *SMART Industry Day 2023*. Purdue Birck Nanotechnology Center (May 11, 2023).

talk An Experiential Learning Approach to Industrial IoT Implementation of Smart Manufacturing. At *SMART Industry Day 2023*. Purdue Birck Nanotechnology Center (May 11, 2023).

poster Being Proactive for Responsible AI: Analyzing Multiple Sectors for Innovation via Systematic Literature Review. At *IEEE Ethics-2023*. West Lafayette, IN (May 19, 2023).

poster A Computational Cognitive Apprenticeship to Promote IoT and AI Learning for Workforce Development in Smart Manufacturing. At *Purdue RIA Future of Work and Learning Spring 2022 Student Poster Symposium*. West Lafayette, IN (April 26, 2022).

poster A Needs Assessment on the Mental Health for Digital Forensic Examiners. At *2021 Purdue Undergraduate Research Conference*. Virtual (November 15, 2021).

REVIEWER

IEEE Technology & Society Magazine (2024)
European Journal of Engineering Education (2024)
Computer Applications in Engineering Education (2024)
2024 American Society for Engineering Education Annual Conference (2023)

TEACHING

Guest Instructor. CNIT 371 - Cyberlaw & Ethics. *Fall 2024. Spring 2024.*

- Lecture and activity on AI ethics, history and philosophy of AI, AI in the workforce, ethical decision-making considerations with AI technology.

Guest Instructor. CNIT 484 - Applications in Data Science. *Spring 2024.*

- Lecture and activity on AI ethics, ethical data acquisition and management, and decision-making for AI developers.

Guest Instructor. CNIT 320 - Policy, Regulation, and Globalization in Information Technology. *Fall 2023.*

- Lecture and activity on AI ethics and professional AI dilemma problem-solving.

**RESEARCH
EXPERIENCE,
AFFILIATIONS**

Research Lab Manager for Research on Computing in Engineering and Technology Education Lab (ROCKETEd), Dr. Alejandra Magana.

Ph.D. Researcher for Research on Computing in Engineering and Technology Education Lab (ROCKETEd), Dr. Alejandra Magana.

Ph.D. Researcher for Governance and Responsible AI Lab (GRAIL), Dr. Daniel Schiff and Dr. Kaylyn Jackson Schiff.

Ph.D. Research Assistant 2022 - current
Purdue University, Dept. of Computer & Information Technology
Co-advisors: Dr. Alejandra Magana, Dr. Daniel Schiff

Mentorship

Mentees

- Parth Joshi. Graduate student. Purdue University.
- Parth Joshi. Undergraduate student. Purdue University.
- Adam Hafez. Undergraduate student. Purdue University.

Undergraduate Research Assistant

Purdue University, Dept. of Computer & Information Technology

- Spring 2022. Workforce development and education in AI/ML technologies. Dr. Alejandra Magana
- Fall 2020. Mental health and well-being of digital forensics professionals. Dr. Kathryn Seigfried-Spellar

**PROFESSIONAL
EXPERIENCE**

Cybersecurity Tutor Jan 2022 - May 2022
Wyant Online Tutoring System

- Cybersecurity tutor for U.S.-based graduate and undergraduate students

IT/Systems Engineer Resident Jan 2021 - Aug 2021
Entara Corporation, Chicago, IL (remote)

- Conducted computer and network engineering to service client needs in a 'Managed Services Provider' environment. Highest 5-star client reviews for 3 months.

Shift Manager Jan 2019 - Jan 2021
RSA Security, West Lafayette, IN

- Managed an incident response environment for a global effort to identify and takedown criminal phishing, malware, and copyright infringement for high-profile clients. Held *Junior* and *Senior Anti-fraud Analyst* positions

LAST UPDATED NOVEMBER 11TH, 2024