

Miriam Elia, *PhD*

Designing the systems behind trustworthy AI.

Email ↗ Website ↗ LinkedIn ↗ GitHub ↗ Google Scholar ↗



Profile

Miriam Elia designs knowledge and information infrastructures for AI systems. Using systems thinking, she identifies where AI creates value and where risks emerge, translating between perspectives to embed AI in real-world settings. Her work spans AI evaluation and lifecycle methods, education programs, cross-institutional projects, AI governance ecosystems across Europe and Southeast Asia, and high-risk medical AI applications. Based in Munich, open to relocation.

Career Path

- 2021 – 2026** **Doctor of Natural Sciences (PhD), University of Augsburg.** Software Methodologies for Distributed Systems, Applied Computer Science. Defended *summa cum laude*, October 2025.
- › Designed *MQG4AI*, a Quality Gates methodology for Responsible AI lifecycle design grounded in EU AI Act quality and risk management system requirements (Art. 17 & Art. 9), illustrated through certifiable AI use cases in medicine.
 - › Conceptualized and led *EsophagusVisualization*, an open-source clinical tool for interactive 3D-reconstructions from multi-modal esophageal imaging; coordinated an interdisciplinary team of computer science students, clinicians, and ethicists.
 - › Drove the *ECG-AI in Emergency Medicine* work with corpuls and the German Heart Center of TU Munich, with a focus on multi-label classification evaluation.
 - › Supervised five BSc and MSc theses and translated research to clinical, legal, and public audiences across Europe.
- 2019 – 2021** **M.Sc. Business Information Systems Engineering, University of Augsburg.** Research assistant at the Institute for Software & Systems Engineering: open-source *Decision Tree Learning* web application with international academic adoption (PMLR conference publication, 2020), and contributions to the Kognia research project.
- 2012 – 2019** **Studies and early industry experience.** B.Sc. Business Information Systems Engineering (2019) and B.Ed. English & French (2016), University of Augsburg. Backend development at Sigfox Germany GmbH (Munich, 2019); technical content and business development at Arrow Electronics (Frankfurt, 2017 – 2019).

Impact

- › *EsophagusVisualization* deployed at the University Hospital of Augsburg, adopted in active medical research
- › 6 first-author publications + 2 under review (full list at Google Scholar)
- › Best Position Paper Award, ICISOFT 2023 (Rome, Italy)
- › 5 supervised BSc and MSc theses across AI & healthcare
- › AI literacy across patient, legal, and public audiences

Languages

German native **English** full professional **French** professional