Xufan Lu

+49(0)15227069217 | xufanlu.joanna@gmail.com
LinkedIn | GitHub | Personal Website

Education

Technical University of Munich, *M.Sc. Information Systems* — Apr. 2024 – Sept. 2026 (Expected)
Munich, Germany

National University of Singapore, *Exchange Program in Computer Science* — Aug. 2022 – Dec. 2022
Singapore

Technical University of Munich, *B.Sc. Information Systems* — Oct. 2020 – Mar. 2024
Top 2%, GPA 1.3 / 1.0 — *Munich, Germany*

Research and Work Experience

Research Aide — Oct 2025 – Apr 2026
Argonne National Laboratory — *United States*

- Built Dr. XAS, an agentic AI assistant that enables non-coding domain experts to perform XAS data analysis within minutes instead of months of software training.

Data Scientist — Feb 2023 – Oct 2025
Siemens Analytics & A.I. Lab — *Germany*

- Delivered enterprise GenAI workflows on Azure AI Foundry, leveraging Azure-hosted model deployments, prompt flows, and managed compute for business-facing use cases.
- Built a multi-agent system connected to Snowflake data to generate customer briefing reports, reducing application latency by 50% and accelerating business insight preparation.
- Owned an internal Mendix OpenAI application for enterprise data, translating stakeholder needs into chat, summarization, and prompt-library features for up to 100 internal users.

Mentor & Coach — Feb 2020 – Aug 2023
she.codes by TEC — *Germany*

- Conducted Python workshops as a volunteer and mentored teenage girls to promote coding literacy.

Student Tutor — Oct 2021 – Mar 2022
Technical University of Munich — *Germany*

- Delivered tutorials for Introduction to Information Systems.

Achievements

Max Weber-Programm Bayern Scholarship — Apr 2022 – Present

- Awarded Bavaria's state scholarship for academic excellence, providing financial support and access to programs that foster personal development.

1st Place HackaTUM 2024 *Wildtrack* — Nov 2024

- Won 1st place by building ALEX, a multimodal lecture assistant, from concept to working prototype within a 48-hour team challenge.

Best in TUM (Top 2% of Cohort) — Apr 2022 – Apr 2024

- Recognized among the top 2% of students at the Technical University of Munich for outstanding academic performance.

Selected Projects

Dr. XAS — Agentic AI Assistant for X-ray Spectroscopy Analysis Oct 2025 – Apr 2026

Tools: Python, TypeScript, AWS

- Designed an agentic analysis workflow for non-coding domain experts, integrating LLMs and explainable AI into X-ray spectroscopy workflows.
- Built and deployed the Dr. XAS analysis interface on Amazon Web Services, using Terraform to manage cloud infrastructure reproducibly.
- Reduced onboarding time for XAS data analysis from months to minutes while keeping outputs within expected accuracy ranges.

ALEX — Augmented Lecture Explainer (1st Place HackaTUM *Wildtrack* 2024) Nov 2024

Tools: Python, LlamaIndex, Streamlit

- Built a multimodal Q&A assistant for live-streamed lectures, enabling students to query lecture content across audio transcripts and slides.
- Applied Whisper to transcribe lecture videos and synchronize timestamps with corresponding slide content.
- Used a self-hosted Llama 3.2 vision model to extract lecture slide content.
- Stored multimodal content in a vector database and applied RAG for grounded answers.

Bachelor's Thesis — Structured-Data Question-Answering Chatbot Oct 2023 – Mar 2024

Tools: Python, LangChain, Azure, Streamlit

- Built a structured-data question-answering chatbot for mathematical and logical queries over tabular PDF data.
- Combined Azure Document Intelligence, Chroma vector search, and RAG to retrieve and reason over extracted PDF content.
- Implemented tool calling for on-demand calculations, improving reliability on quantitative questions beyond plain text generation.

Tick Talkers — Disease Spread Prediction Project Nov 2022 – Jun 2024

Tools: Python, Statsmodels, Scikit-learn

- Built ARIMA-based time-series models to analyze environmental and human factors influencing the spread of Lyme Borreliosis.
- Completed as a 20-month TUM Junge Akademie scholarship project, covering research design, data collection, analysis, and presentation of findings.

Deep Learning Projects Apr 2024 – Jun 2024

Tools: Python, PyTorch, PyTorch Lightning, TensorBoard, NumPy

- Implemented a CNN-based facial keypoint detector to predict 15 facial landmarks from image pixels, covering preprocessing, model training, and regression evaluation.
- Built CIFAR-10 image classification pipelines in PyTorch/PyTorch Lightning, applying data augmentation and TensorBoard monitoring to improve generalization across 10 object classes.

VolMe — Volunteer Event Platform May 2024 – Aug 2024

Tools: Java, SQL, PostgreSQL, MongoDB, Docker

- Built a Dockerized volunteer-event platform using SQL/PostgreSQL and MongoDB to support event publishing, user selection, and participation workflows.

Technical Skills

Programming Languages: Python, SQL, Java, JavaScript, TypeScript, C/C++, R
AI/ML Capabilities: ML/DL, computer vision, time-series forecasting, RAG, agentic AI, multi-agent systems, XAI
GenAI/Agent Frameworks: OpenAI Agents SDK, Microsoft Semantic Kernel, Microsoft Agent Framework, AutoGen, LangChain, LlamaIndex
Developer Tools: Git, Docker, Azure Cloud Platform, Amazon Web Services, TensorBoard
Libraries: Pandas, NumPy, PyTorch, TensorFlow, Keras, scikit-learn, React, Node.js, FastAPI