

Kai Li

Education

Apr 2024 – M.Sc. Computer Science (*Grade: 1.1 / 5 (A)*), *Technical University Darmstadt*, Darm-Mar 2026 stadt, Germany

Specialization: Machine Learning, Multimodal AI, and Generative AI

Feb 2025 – **Exchange Semester**, *National Taiwan University*, Taipei, Taiwan June 2025

Oct 2020 – **B.Sc. Computer Science** (*Grade: 1.52 / 5 (A–)*), *Technical University Darmstadt*, Dec 2024 Darmstadt, Germany

Specialization: Natural Language Processing and Artificial Intelligence

Feb 2025 – **Exchange Semester**, *Högskolan i Skövde*, Skövde, Sweden

June 2025

Oct 2019 – **Electrical Engineering (Coursework completed)**, *Technical University Darmstadt*, Darm-Sept 2020 stadt, Germany

Completed foundational coursework relevant to Computer Science before switching majors.

Bachelor Thesis

Title Evaluating Cultural Diversity in Text-to-Image Models

Supervisors Cecilia Chen Liu, Msc. and Prof. Dr. Iryna Gurevych

Description Developed a large-scale benchmark to assess cultural bias in state-of-the-art Text-to-Image models (e.g., Stable Diffusion XL, FLUX.1), using a multilingual dataset (5 languages) and 2.3M compositional prompts. Designed a novel evaluation pipeline with Visual Question Answering models (e.g., Qwen2-VL-7B-Instruct) to measure text-image alignment. Findings revealed 10% underperformance on non-Western cultures, exposing systemic cultural and multilingual gaps. Grade: 1.0 (A+).

Experience

Vocational

Oct 2023 – **Incident Management Module** - **Train Management System**, *Institute for Railway Sys*-March 2024 *tems, TU Darmstadt*, Darmstadt

Developed a simulation and GUI-based module in Python (Tkinter) for managing 25+ railway incident scenarios. The tool supported interactive configuration for training and planning. Applied agile methods and usability testing to ensure efficiency.

- Built a real-time simulation with incident visualization and an intuitive Tkinter GUI.
- Implemented backend logic for scenario execution and system response handling.
- Achieved 30% task efficiency gain through usability testing; used Scrum and Git for workflow.

Nov 2023 - Tutor, Department of Computer Science, Technical University Darmstadt, Darmstadt,

Feb 2024, Germany

Nov 2022 – Subjects: Foundations of Language Technology, Introduction to Compiler Construction, Visual Com-Feb 2023 puting

- O Clarified complex technical concepts to enhance student understanding
- O Led interactive seminars to boost engagement and participation
- O Collaborated with teaching staff to streamline course delivery and organization

Oct 2021 – **Mentor, IMS System, Department of Computer Science**, *Technical University Darm*-Mar 2022 *stadt*, Darmstadt, Germany

- Mentored first-year students through active listening and guided dialogue to support their development.
- Led weekly coaching sessions to promote self-reflection, goal-setting, and a growth mindset.
- Monitored progress and tailored coaching to boost engagement and resilience.

Computer skills

Languages:		Python	Used extensively in coursework and Bachelor Thesis for data analysis and automation
	••••	Java & Bash	Applied in coursework and scripting workflows on Linux systems
Methods:		Git	Regular use for version control and collaboration
	••••	Scrum	Practiced in academic and team environments; familiar with agile workflows
Frameworks & Libraries		Pandas & NumPy	Performed advanced data manipulation and nu- merical computing in Python
		Huggingface & Scikit-learn	Implemented state-of-the-art NLP models and classical machine learning algorithms
	•	PyTorch	Designed and trained neural networks for image recognition and NLP

Languages

German Native

English C1 – Advanced Used in academic and professional settings
Chinese B1/B2 – Intermediate Heritage speaker; completed formal courses during exchange
French A2 – Basic Completed coursework during school
Swedish A2 – Basic Took introductory classes during exchange semester

Scholarships

Feb 2025 - Recipient of the PROMOS Scholarship

June 2025

Oct 2021 - Recipient of the Deutschlandstipendium Scholarship

Sep 2023

Interests

Bouldering Recreational climber for 5 years

Traveling Interested in learning about different cultures and languages

Languages Actively learning and practicing new languages