Noah Mamie

✉ noah@mamié.ch   🌐 mamié.ch   in noah-mamie

Research Interests

Artificial Intelligence, Language Modeling, Recommender Systems, Knowledge Representation

Education

2025 – Present **PhD Candidate in Artificial Intelligence, University of Zurich**.
Supervisor: Prof. Dr. Abraham Bernstein. DDIS Group.

2022 – 2024 **Master of Science in Artificial Intelligence, University of Zurich**.
Final GPA: 5.54/6.0 - *Summa Cum Laude*
Thesis title: *The Society of HiveMind: Multi-Agent Optimization of Foundation Model Swarms to Unlock the Potential of Collective Intelligence.*

Special Student in Computer Science, ETH Zurich.
Relevant coursework: ML for Healthcare, Distinguished Seminar in Robotics.

2024 **Graduate Exchange Semester, University of Uppsala**.
Relevant coursework: Reinforcement Learning, Natural Comp. Methods for ML.

2021 – 2022 **Computer Science, Additional Requirements, University of Zurich**.
Relevant coursework: Informatics (C and Python), Software Engineering (Java).

2017 – 2020 **Bachelor of Arts in Business Administration, University of St.Gallen**.
Thesis title: *Watermarking Deep Neural Networks.*

2019 **Undergraduate Exchange Semester, Singapore Management University**.
Relevant coursework: Finance, Industry consulting project.

2012 – 2016 **Bilingual *Matura* (EN-DE), Kantonsschule Enge, Zurich**.
Main Subject: Economics, Electives: Physics and Chemistry.

Experience

2025 – Present **Doctoral Researcher, University of Zurich**.
Focus: GenAI in the Context of Personalized News Recommender Systems.

2025 **GenAI Development Intern, Detecon Switzerland AG, Zurich**.
Focus: Retrieval Augmented Generation, Large Language Models, Intelligent Agents.

2023 – 2025 **Research Assistant, ETH-MTEC Chair of Applied Economics, Zurich**.
Focus: Knowledge Graph Retrieval, Recommendation Systems, LLMs, GNNs.

2023 **Teaching Assistant, Department of Computer Linguistics UZH, Zurich**.
Assisted Dr. Mathias Müller for the course "Essentials of Text and Speech Processing".

2021 – 2022 **Private Equity Intelligence DACH, Storskogen Switzerland AG, Zurich**.
Focus: Large-Scale Data Analytics, Digitalization, OPEX, Mergers & Acquisitions (M&A Research, Deal Flow, Due Diligence), and Optimization of Business Areas (Services, Trade, Industry).

2021 **Intern in Private Equity, Artum AG (Storskogen CH since 07/21), Zurich**.
Contributed to the merger of Artum and Storskogen (July 2021); Identified and contacted acquisition candidates; Analyzed target company data and trends; Developed company valuations and transaction structures.

2020 **Teaching Assistant, ITEM-HSG, St. Gallen**.
Assisted Prof. Dr. Wortmann in Fall 2020 (Skills: Operations Management, Excel).

Experience (continued)

Assurance Industrial Services Intern, Ernst & Young, Zurich.
Conducted audits of annual and quarterly accounts per national and international standards (e.g., IFRS).

2019 **Student Consultant, Dr. Wolff Singapore Pte. Ltd., Singapore**.
Launched an e-commerce campaign for Plantur 21 (SEM, SEO, social media); Conducted primary research and grew the fan base; Presented weekly client updates.

Teaching Assistant, IWI-HSG, St. Gallen.
Assisted Dr. Silic in Spring 2019 (Skills: Programming, Python, R, HTML/CSS/JS).

2016 **Intern in Accounting, Marketing, and Sales, SpanSet, Villabona, Spain**.
Managed supplier bookkeeping and payment software; Coordinated with factory workers and sales team.

Research

Conference Proceedings

1. N. Mamié and S. R. Xi, "The Society of HiveMind: Multi-agent Optimization of Foundation Model Swarms to Unlock the Potential of Collective Intelligence," in *Advances in Swarm Intelligence*, Y. Tan and Y. Shi, Eds., Singapore: Springer Nature Singapore, 2025, pp. 243–254, ISBN: 978-981-95-0982-9.

2. S. Rao, N. Mamié, Y. Tu, and P. Bhandar, "AI Support Systems for Academic Research," in *Proceedings of the 9th edition of the Swiss Text Analytics Conference*, 2024, pp. 226–227.

3. E. Egli, N. Mamié, E. L. Dolev, and M. Müller, "Voting Booklet Bias: Stance Detection in Swiss Federal Communication," in *Proceedings of the 8th edition of the Swiss Text Analytics Conference*, received best poster award, ACL Anthology, 2023. 🔗 URL: https://arxiv.org/pdf/2306.08999.

Featured Projects

2025 **HiveLLM: "The Society of HiveMind"**.
Explored the foundations for a graph-based framework for building individual AI agents and orchestrating self-organizing, self-improving swarms. *Python*.

2024 **Reinforcement Learning: "Playing Atari with Deep Reinforcement Learning"**.
Trained a deep RL agent to successfully play the famous Atari game Pong. *Python*.

Vision Algorithms for Mobile Robotics: "A Visual Odometry Pipeline".
Developed and demonstrated a complete visual odometry pipeline. *Python*.

ML for Healthcare: "Interpretable and Explainable Classification for Medical Data".
Worked on a project for explaining deep learning models on medical data. *Python*.

2023 **ZurichNLP: "Voting Booklet Bias"**.
Developed a tool to analyze bias in voting booklets. *Python*.

2022 **Chatbot: "Building an Intelligent Conversational Agent"**.
Created an interactive chatbot with intelligent response capabilities. *Python*.

MyPark: "A Parking Reservation System".
Built a web application for reserving parking spaces. *React.js, Java, Gradle, Heroku*.

2020 **Bachelor's Thesis: "Watermarking Deep Neural Networks"**.
Researched and implemented methods for watermarking deep neural networks. *Python*.

2019 **Portfolio: "Data Visualization - Storytelling with R"**.
Created a series of data visualizations focusing on effective storytelling. *R, Python Jupyter*.

Skills

Languages	▉	German (native), English (bilingual), French (fluent), Spanish (fluent).
Programming Languages	▉	Python, C, Java, JavaScript, R, Matlab.
Databases	▉	MySQL, PostgreSQL, SPARQL.
Machine Learning	▉	PyTorch, PyTorch Geometric, TensorFlow.
Web Development	▉	Html, css, React.js, TypeScript, JavaScript.
Other Tools	▉	LaTeX, Gradle, Heroku, Google Cloud, SpringBoot, Linux OS.

Volunteering

2022 – present	▉	**Core Member, Global AI Hub**. Active member of the 10million.AI initiative.
	▉	**Head of IT, Swiss Racketlon Federation**. Board member responsible for IT, including website management, SEO, and data analytics.
2020 – 2021	▉	**Head of Finance and Treasury, SGMUN Conference, St. Gallen**. Managed budget and financial decision-making for the conference.
2018 – present	▉	**Member of the Electoral Office, City of Wädenswil**. Volunteered at polls and elections in Switzerland.
2015 – present	▉	**Coach Diploma, Jugend+Sport Switzerland**. Undertakes annual educational courses to enhance teaching methods for coaching badminton and table tennis to aspiring young players.

Miscellaneous Experience

Awards and Achievements

2023	▉	**Best Poster**, Awarded as the "best poster" at the 8th Annual SwissText Analytics Conference.
	▉	**Datathon Winner**, 1st Place in the D-One Challenge of the ACE-ETH Datathon 2023.
2018	▉	**Honorable Mention**, 2nd Place at St. Gallen Model United Nations Conference in the Committee on LAWS and Cybersecurity.

Certification

2020	▉	**CS50x: Computer Science and the Art of Programming, HarvardX**. Completed MOOC covering introductory computer science concepts.

References

Prof. Dr. Abraham Bernstein
Full Professor
University of Zurich,
Department of Informatics.
  bernstein@ifi.uzh.ch

Prof. Dr. Peter Egger
Full Professor
ETH Zurich,
D-MTEC.
  pegger@ethz.ch

Prof. Dr. Lena A. Jäger
Associate Professor
University of Zurich,
Department of Computer Linguistics.
  jaeger@cl.uzh.ch

Prof. Dr. Olle Gällmo
Full Professor
University of Uppsala,
Department of Information Technology.
  olle.gallmo@it.uu.se