CYRINE CHAABANI
AI Research & Engineering

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EDUCATION

2022 – 2024   **Honors Degree, Technology Management**   **CDTM (TUM & LMU)**
Focus: product management, rapid prototyping, leadership.

2019 – 2023   **M.Sc. Robotics, Cognition, Intelligence**   **Technical University of Munich**
Focus: deep learning, NLP, generative AI, graph learning, robotic motion planning.

2016 – 2019   **B.Sc. Electrical Eng. & Information Technology**   **Technical University of Munich**
Focus: signal processing, control systems, AI.

EXPERIENCE

11/23 – now   **Co-founder & CTO, Full-time**   **Wattzo**
Built AI-powered energy optimization platform to boost the integration of renewable energy resources in the energy mix in different regions in Africa. It is an LLM-based decarbonization pathway assistant, with tailored AI models for forecasting consumption and generation, and agentic workflows to plan wheeling and compliance operations.

01/25 – 07/25   **Technical AI Consultant, Full-time**   **Allianz Technology | Trusteq**
Deployed LLM-based compliance agentic workflows (70% faster audits); Built backend APIs embedding LLM reasoning for cloud apps deployment optimization.

03/24 – 01/25   **Founding Lead AI/ML Engineer, Full-time**   **Xaver**
Shipped LLM+RAG Chat Assistant (95% resolution rate); Built adaptive customer-journey personalization engine to boost conversion rates for financial products (+60% conversions); Built data scrapping workflows for training ML models for various financial forecasting tasks; Implemented performance dashboards for live agentic architecture monitoring and tuning using Langfuse; Led hiring for AI talent and mentored junior Tech staff members.

08/23 – 02/24   **Researcher & Program Manager, Full-time**   **CDTM**
Published on explainable generative AI for energy; Led research on multi-agent optimization using transformer and RL-based architectures; taught product management, ideation, and rapid prototyping to 50+ graduate students.

10/21 – 07/23   **Applied Scientist (Speech & Sign Language), Full-time**   **Microsoft**
Developed grapheme to phoneme models for German and its dialects. Run several experiments using different architectures and pre-trained embeddings. Achieved an improvement of +10% accuracy compared to previous architecture. Built real-time sign language detection system (87% accuracy) using Graph learning with bias-aware attention and a specialized loss function. Built multimodal deep learning for sign language detection, winning best model prize at WMT22.

04/21 – 08/21   **AI Research Intern, Full-time**   **IdealWorks**
Leveraged ontologies to enhance planning edge-cases for autonomous navigation of STR-robots; Produced 4,000+ synthetic audio/visual training examples via Nvidia Isaac Sim for training and testing the ontology-based approach; Built data ingestion and evaluation tooling for continuous benchmarking.

11/19 – 04/21   **ML Engineer, Part-time**   **Motius**
Developed AI solutions for several uses-cases ranging from tabular data classification, document understanding, automated information processing and automated defect detection using deep learning, computer vision and statistical data analysis (XGboost, CNNs, LSTMs, Ensemble Models and general NLP); Delivered PoCs to pilot in less than 6 weeks; maintained 100% delivery success rate with clients; Acted as lead ML engineer on 5 multi-disciplinary R&D project teams, clients included Henkel, OSRAM, Ministry of Energy in Dubai.

03/19 – 11/19   **Computer Vision & Robotics Intern, Full-time**   **BMW**
Built real-time RGB-D object detection (96% accuracy); Developed the vision component of a prototype robot to detect and grab specific objects and move them to a target location. (Object detection with AI/CNNs, coordinates translation from pixels to real-world, using SLAM for navigation, etc)

| 10/18 – 03/19 | **Data Scientist, Part-time** | E.ON |
| | Generated insights with data processing using R and python, tracked user behavior on the official website using Google Analytics and Google Tag Manager as well as developed scripts in JAVA to automate repetitive processes and common tasks for the team. | |

| 08/18 – 10/18 | **Internship at the Chair for Signal Processing, Full-time** | TUM |
| | Studied the feasibility and the requirements for a robust design of an automatic emergency breaking system considering sensor errors in MATLAB. | |

| 11/17 – 08/18 | **Tutor for Computer Systems and Programming in C, Part-time** | TUM |
| | Supported the teaching of the topics Computer systems and Programming in C by offering weekly tutoring hours to students, the courses are offered by the Chair of Data Processing at TUM. Additionally helped the Chair with exam correction. | |

| 08/17 – 11/17 | **Tutor for Mathematics (Analytics and Linear Algebra), Full-time** | TUM |
| | Supported the teaching of the topics Analytics I and Linear Algebra I by offering weekly tutoring hours to students. | |

PROJECTS

| 04/25 | **Blog Summerizer** | MIT Sundai Club |
| | Built Blog to Talking Head Video Generator.This repo transforms blog post content into engaging short videos featuring an AI talking head. Link to repo | |

| 10/24 – 02/25 | **GenAI UX Best practices** | BMW |
| | Researched and defined UX/UI best practices for GenAI products and tools to boost their integration and ease-of-use for all categories of employees and for all use-cases. The efficacity of the then defined approach was proven through user-experiments and feedback. | |

| 11/24 | **Unbiased Cathode** | MIT Energy and Climate Hackathon |
| | LLM-based co-pilot for battery material researchers that helps them quickly understand the supply-chain constraints (E,S and G) of the materials they are using in their experiments. | |

| 10/22 – 02/23 | **Konvolut** | CDTM |
| | Built an ESG reporting co-pilot and early supply chain risk detector for SMEs. It relies on sentiment analysis from specialized data sources to detect any warning signs from known suppliers, as well as suggest potential alternatives. Additionally, it generates compliance reports seamlessly. | |

PUBLICATIONS

| 2024 | **Explainable Energy Communities with Generative AI** | IEEE ISGT |
| | Introduces a generative-AI interface for Renewable Energy Communities that enables natural-language queries over optimization and forecasting workflows. Demonstrates improved transparency and decision support in case studies of community energy management. | |

| 2023 | **Signer Overlap in Sign Language Detection** | Preprint |
| | Shows that training/test signer overlap inflates performance in sign-language detection. Proposes non-overlapping splits and reports a measurable drop when overlap is removed, arguing for more realistic evaluation protocols. | |

| 2022 | **Clean Text & Full-Body Transformer for Sign Language Translation** | WMT22 |
| | Describes a system that couples full-body visual features with careful target-text cleaning to address large vocabulary and data scarcity in SLT. Achieves state-of-the-art results in the WMT'22 task with strong human evaluation. | |

LANGUAGES

Arabic C2
French C2
English C1
German C1

AWARDS

11/23: 1st Prize Winner @MIT Energy & Climate Hackathon
06/22: Best Model for Sign Language Translation @WMT22
09/15 – 09/22: Academic Excellence Scholarship with 0.04% acceptance rate

VOLUNTEERING

AI Young Leader @UN-ITU - Co-founder and Impact lead, building AI projects for the public good.
Global Shaper @WEF - Member of the leadership team and co-founder of the climate cafe
MUN Secretary @TUM - co-organized and led the weekly sessions