


Muhammad Ammar

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 /Erlangen, Bavaria, Germany

Experience

Master's Thesis, Siemens AG + FAPS FAU

May 2026 – Present

- Beyond the Agent: A Workflow-Level Review of **Agentic AI Systems**.
- **Research Objective:** *How are agentic AI systems structured, controlled, and evaluated as end-to-end workflows, and where do current approaches lack system-level rigor?*

Data Analytics Researcher (Working Student), Siemens AG

Oct 2024 – Present

- Conducted systematic literature review of **software ecosystem health analysis**. Surveyed 61 research articles and analyzed 416 health metrics to present a **unified graph of metrics** to measure ecosystem health in a hierarchical way.
- Developed a LLM based **Text-to-Cypher** pipeline analyzing software ecosystem health using a health metric KPI tree.
- Created a metric graph to oversee real-time visualization of underlying database represented by neo4j.
- Developed an LLM powered **Prompt-to-Visualization** pipeline to display the most relevant dashboard to the user query, lowering TTI from 2 minutes to 5 seconds.
- Submitted **6 Invention disclosures** and authored **4 research papers**.

Project Thesis, FAPS FAU

Oct 2025 – Mar 2026

- Architectural Paradigms of **Multi-Agent Systems** and Agentic AI in Intelligent **Manufacturing Systems**, A Systematic Literature Review.
- **Research Objective:** *How have agent architectures evolved in manufacturing systems, and what architectural design principles emerge from this evolution that are relevant for manufacturing control?*

Machine Learning Engineer, NeuroOceansAI

Jan 2024 – Mar 2024

- Finetuned multiple audiovisual **deepfake detection models** and evaluated on performance metrics.
- Led the entire pipeline development, from dataset collection, preprocessing, to model training and evaluation.

Solution Analyst, Learners.ai

Jul 2023 – Dec 2023

- Used LangChain and pinecone to create a GPT (OpenAI API) powered **RAG** driven chatbot that takes in a sales call transcript and generates a sales proposal.
- Developed a copywriter chatbot using **LangChain Agents**, with tool calling and a curated knowledge base.

Education

MSc Electromobility-ACES (2024~) – 1.4 Grade

Erlangen, Germany

Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)

AI & Robotics In Extended Reality Seasonal School (2025)

Pisa, Italy

Scuola Superiore Sant'Anna (SSSA)





B.Sc. Mechanical Engineering (2018-2022)

Islamabad, Pakistan

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY (NUST)

English Language Proficiency (C2) – IELTS 8.5 Bands

Publications

- A Chain-Driven Live Roller Mechanism for Loading and Unloading Packages on Autonomous Mobile Robots in Warehouses. 
- Prompt-to-Metric: LLMs and Graph Algorithms for Platform Ecosystem Health Monitoring. 
- Towards Data-Driven Real-Time Performance Monitoring of Platform Ecosystems. 
- Health and Performance Indicators of Platform Ecosystems: a systematic literature review. 
- Schema Injection Strategies for LLM-Based Text-to-Cypher Query Translation: An Empirical Study (**Won best paper Award**)