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EXPERIENCE

R&D Hardware System in Magnetic Resonance Signal, Control and Receive Mar 2025 - Present
Working Student at Siemens Healthineers A.G. *Erlangen, DE*

- Collaborating with the hardware and software research department on FPGA development workflows, focusing on streamlining the toolchain for efficient FPGA design and testing.
- Leveraging tools such as FuseSOC, Edalize, and Vunit to facilitate FPGA product development, ensuring smooth and optimized toolchain operation.

Development of a Human-Robot Interaction Platform for ROS2-based Systems Jun - Nov 2024
Project Thesis at Factory Automation and Production System / FAU *Erlangen, DE*

- Created a user-friendly interface for ROS2 robotic systems, simplifying complex operations for users of all skill levels.
- Developed functionality to support seamless connectivity and management of multiple robotic systems through a single platform.
- Integrated an LLM to facilitate more intuitive user interactions, providing enhanced conversational capabilities within the interface.

Teach a Pen to Read: Gamification for Handwriting Recognition Apr - Jun 2024
Student Project at Schwan-Stabilo / FAU *Nürnberg, DE*

- Analyzed machine learning algorithms for handwriting adaptation and identified common user errors.
- Designed gamified solutions to reduce training errors with digital pens.
- Developed a prototype using Unity and STABILO's API, and conducted user testing.

EDUCATION

Friedrich-Alexander-Universität Erlangen-Nürnberg Apr 2023 - Present
MSC ElectroMobility-ACES *Erlangen, DE*
Specialization in Artificial Intelligence and Production & Sustainability

- Coursework: Machine Learning, Deep Learning, Programming Algorithms and Data Structures, Data Science, Human Computer Interaction, Computer Vision, Robotics Frameworks.

Delhi Institute of Tool Engineering Aug 2017 - Apr 2021
B. Tech Mechatronics *Delhi, IN*

- Coursework: Programming, Embedded System, Signal and Control System, Robotics.

Languages: German (A2 Level), English (Fluent)

SKILLS SUMMARY

- **Programming Language:** Python, Matlab, TypeScript
- **Framework:** Pytorch, OpenCV, LangChain, Transformers (Hugging Face), React, Langchain, Langgraph and LangSmith
- **DevOps:** CI/CD with GitHub Actions and Docker
- **Databases:** MongoDB, Milvus, Postgres, SQLite
- **Organizational Skills:** Scrum, Agile Development, Team Collaboration, Time Management, Project Planning
- **Other Skills:** MS Office Suite, unittesting, Git, pyqt, flask

PROJECTS

Point Prevalence Analysis App for Infectious Disease Stewardship Oct 2024 - Mar 2025
University Hospital Erlangen *Erlangen, DE*

- Developed a web application to assist infectious disease specialists in point prevalence analysis and supporting antimicrobial stewardship effort. Interviewed multiple Infectious Diseases Specialists to translate complex medical workflows into app features, enabling streamlined data entry, analysis, and reporting. Facilitated education for non-specialist physicians using RAG using finetuned GPT3.5 Turbo. Utilized Pinecone vector for embeddings. Deployed using a Docker container. Project is still in progress.
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DEHN Smart Process Finder Oct 2025

- Developed a smart assistant that streamlined the design of production equipment by leveraging reusable modules. The solution partially automated the manual process, improving speed, accuracy, and accessibility. It enabled users, including non-experts, to identify suitable solutions efficiently while fostering collaboration across teams and ensuring greater consistency in equipment development.
  View Here

EXTRA-CURRICULAR ACTIVITIES

- Write software development articles on Medium and create videos on YouTube, viewed by 10K+ developers monthly.
- **Hackathon - Road To Start Submit:** Secured **second place** in the Hackathon by Start Nuremberg, where the challenge was to address the issue of **Recycle Management in Disaster Situations** and propose strategies for waste mitigation. View More
- **ServusAI Hackathon – Winner, DEHN SE Challenge:** Developed a streamlined solution for manufacturing systems that enabled users to input **natural language queries** for part design. The system generated feasible manufacturing options while validating results at each search step, supporting innovative and efficient production workflows. View More