

AI, ML, NLP, COMPUTER VISION, DATA SCIENCE, AND SOFTWARE ENTHUSIASTS

## WORK EXPERIENCE

— BACHELOR THESIS

JULY 2025 - CURRENT

### Multimodal LLM-driven PNG document parser

- Implementing intelligent document parsing (PDFs, text, and images) with automated chunking, embeddings, and knowledge base integration via REST APIs.
- Investigation of OCR techniques (EasyOCR, Tesseract) with preprocessing to improve accuracy.
- Collaborating in an agile environment using modern technologies: Java, Rust, TypeScript, Node.js, React, and Kubernetes.

— AI INTERN

DECEMBER 2024 - JUNE 2025

- Development of a RAG chatbot: Fine-tuning a pre-trained LLM and integrating a Retrieval-Augmented Generation (RAG) pipeline to build an advanced chatbot for hospital management.
- Agentic AI research: Researching and implementing agentic support functions using the Model Context Protocol (MCP) to improve the chatbot's autonomy and adaptability.
- Workflow automation: Designing and deploying scalable n8n and LangChain workflows using AWS and Azure that enable dynamic document analysis, knowledge retrieval, and seamless system integration.

— SOFTWARE

DEVELOPER

FEBRUARY 2024 - JULY 2024

- C++ (Raspberry Pi): Contributed to the design and implementation of intelligent sensor prototypes to improve data accuracy and performance in embedded systems.
- MATLAB: Assisted with data modelling, simulation, and analysis to evaluate and improve vehicle performance metrics.
- Git & Bitbucket: Collaborated on the development of reliable firmware in C++ for embedded systems in the automotive industry, ensuring proper version control and maintainability.

## PROJECTS

### AUTONOMOUS UNDERWATER VEHICLE

IEEE, MARCH 2019

### MRI Diffusion Image Distortion Correction

PROF. MARION MENZEL, JANUARY 2024 – JUNE 2024

- Conducted extensive research on Hough Transformation for determining voxel directions to detect cancer cells in brain.

## EDUCATION

### ARTIFICIAL INTELLIGENCE

OCTOBER 2022 - CURRENT

- Software development and web technologies: Django, PHP, Java (OOP)
- Data science and AI: (ML algorithms, NLTK), data visualization
- Computer vision and image processing: OpenCV
- Big data concepts and tools

### STATISTICS

JANUARY 2019 - MARCH 2022

Real analysis, linear and higher algebra, R programming, economics

## SKILLS

### PROGRAMMING

Python, C++, Java, Prolog

### AI TOOLS

PyTorch, Tensorflow, Langchain, Langgraph, NLTK, CNN, Transformers

### WEB TECHNOLOGY

HTML, CSS, Django, React, NodeJS (Express), MongoDB

### OTHER

Flutter, Jira, Linux, n8n, GitHub

## CERTIFICATE

### SQL

BIG DATA TECHNOLOGY, APRIL 2024

### NETWORK SYSTEM

GOOGLE, JANUARY 2024

### MACHINE LEARNING

STANFORD UNIVERSITY, AUGUST 2020

## LANGUAGES

ENGLISH C1  
GERMAN A2