



PAVAN KUMAR

PERSONAL DATA

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Personal website:
<https://pavan-aiml.github.io/pk/>

GitHub:
<https://github.com/Pavan-AIML>

SKILLS

Languages:
Python, MATLAB, SQL

Frameworks & Libraries:
PyTorch, TensorFlow, Hugging Face, LangChain, LangGraph, Seaborn, NLTK, FastAPI, Scikit-learn

Technologies & Tools:
Deep-Learning, NLP, Computer Vision, Power BI, Excel, Docker, Git, Kubernetes, Azure Cloud, Chroma DB, Machine Learning

Project Management:
Scrum, Kanban

LANGUAGE SKILLS
German (A1)
English (Fluent)
Hindi (Mother tongue)

PARTICIPATION
TUM AI Makethon2024 [\[Link\]](#)

HOBBIES AND INTERESTS
Calisthenics, cooking

WORK EXPERIENCE

01/09/2025 - current, Munich, Germany, Intern, Part-time

AI-Engineer, Process Automation, Munich RE

- Built end-to-end Agentic AI automation pipeline to automate complex FSRI data mapping, optimized workflows and eliminated repetitive manual tasks for MGAs
- Architected Agentic RAG pipeline and implemented LangSmith based evaluation

15/06/2025 - 31/08/2025, Munich, Germany, Working Student, Part-time

AI-Engineer, ML Ops, MERMEC

- Automated critical railway workflows by building a multi-agent system using LangGraph, incorporating hybrid RAG to streamline access to technical documents
- Implemented CI/CD pipelines using Docker and GitLab

01/06/2024 - 30/09/2024, Munich, Germany, Working Student, Part-time

Data Engineer, BMW

- Collected raw vehicle sensor data from Azure Data Lake
- Built ETL pipeline for data ingestion and transformation in Azure Databricks
- Used SSMS to query data from Azure SQL Database & visualize using Power BI

15/10/2023 - 14/04/2024, Oberkochen, Germany, Intern, Full-time

Data Scientist, ZEISS

- Built a multi-degree polynomial regression model from scratch
- Trained different AI model architectures using tool Optuna for fine-tuning
- Deployed the final model to production

19/06/2023 - 18/08/2023, Munich, Germany, Intern, Part-time

Data Scientist, Max Planck

- Built a data-analysis pipeline for spectral image dataset
- Trained a CNN to correctly identify the incorrect predictions by pipeline

20/08/2022 - 17/02/2023, Munich, Germany, Working student, Part-time

Data Analyst, Digital marketing, Infineon Technologies

- Analyzed internal training data using Python (Pandas) and Excel
- Built interactive Power BI dashboards to enhance data monitoring and reporting

01/03/2019 - 30/09/2020, Pune, India, Full-time

Data Analyst, HomeLane

- Market data and customer data analysis using SQL and Python
- Built Excel and BI dashboards for reporting and analysis

01/10/2017 - 30/01/2019, Pune, India, Full-time

Young Engineer, L&W Construction

- Planned, coordinated and executed Capgemini phase 3 Hinjewadi project
- Built Excel and Google Analytics interactive tracker to track the daily activities

PROJECTS

- Master's thesis: Neural process modeling for spatial-temporal reconstruction of AOD and PM2.5 [\[Link\]](#)
- Agentic RAG: HTML parser, Chunking, Embedding, Vector DB and Hybrid retrieval [\[Link\]](#)

EDUCATION AND TRAINING

01/10/2021 – current, Munich, Germany

- M.Sc. Mathematics in Science and Engineering, Technical University of Munich

14/02/2013 – 01/09/2017, Vellore, India

- B.Tech. Civil Engineering, Vellore Institute of Technology

- Related University courses:

Foundations of Data Analysis, Optimization, Reinforcement Learning, Advanced Computer Vision, Deep Learning, Machine Learning