



## PAVAN KUMAR

### PERSONAL DATA

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

### SKILLS

Languages:  
Python, SQL, MATLAB, R

Frameworks & Libraries:  
PyTorch, Hugging Face,  
LangChain, OpenCV, Lang  
Graph,

Technologies & Tools:  
Deep-Learning, NLP, Power BI,  
Excel, SSMS, Docker, Git,  
Kubernetes, Azure Cloud,  
Pinecone, Machine Learning

Project Management:  
Scrum, Kanban

### LANGUAGE SKILLS

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

### PARTICIPATION

TUM AI Makeathon2024 [\[Link\]](#)

### HOBBIES AND INTERESTS

Calisthenics, cooking.

## WORK EXPERIENCE

01/09/2025 – Current, Munich, Germany, Working student, Part-time

### Process Automation, Munich RE

- Automated FSRI data mapping process and end to end MGAs process.
- Built MGAs SharePoint tracker and connected Power BI for live tracking.

01/02/2025 – 31/08/2025, Munich, Germany, Working student, Part-time

### AI / ML Ops Engineer, MERMEC

- Orchestrated an autonomous multi-agent system using LangGraph and RAG to automate railway process.
- Set up a robust CI/CD pipeline with Jenkins and Git branching for deployment.

01/06/2024 – 30/01/2025, Munich, Germany, Working student, Part-time

### Data Analyst, BMW

- Ingested and processed raw vehicle telemetry 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 & visualized using Power BI.

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

### ML Engineer, ZEISS

- Built a multi-degree interpolation regression polynomial model from scratch.
- Leveraged tool Optuna for automated hyperparameter optimization to maximize the model accuracy prior to production.

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

### ML Engineer, Max Planck

- Built a data processing pipeline for 3D spectral image dataset.
- Trained and implemented a CNN to correct classification errors in eROSITA.

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

### Data Analyst, Infineon Technologies

- Optimized complex SQL joins, cleaned and transformed raw datasets using Python (pandas).
- Built an interactive BI dashboard, used conditional formatting for tracking.

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

### Project Manager, HomeLane (Startup)

- Directed end-to-end execution of multiple complex construction projects.
- Unified SQL extraction and Python modelling in VS Code to streamline analysis.
- Built interactive Excel dashboards for tracking of critical project KPIs.

## PROJECTS

- Master's thesis: Designing and training Deep Neural Process Networks for Geospatial Air Quality Forecasting using NASA dataset (Python) [\[Link\]](#)
- Agentic RAG Pipeline (Python, LLMs, Chroma vector DB) [\[Link\]](#)

## EDUCATION AND TRAINING

01/10/2021 – Present, 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:

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