Muhammad Afaq Jamshaid

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SKILLS

Programming Languages: Python, JavaScript, C++, Dart, R, SQL, MATLAB, HTML, CSS
Frameworks: Streamlit, React.js, Node.js, FastAPI, Pytest, Jest, Flutter
Libraries: Keras, PyTorch, Pandas, Numpy, OpenCV, Pandapipes
Tools & Platforms: Git, Docker, Firebase, SQLite, PostgreSQL, Microsoft Office, LaTeX, Notion
Areas of Expertise: Machine Learning, Computer Vision, GPT, Prompt Engineering, LLM

WORK EXPERIENCE

Research Assistant (Hiwi)   June 2024 – Current
Brandenburgische Technische Universität Cottbus   *Cottbus, Germany*

- Utilized Python and the pandapipes library to create and simulate pipeline network topologies for CFD research, analyzing simulation data and visualizing network configurations.

- Contributed to the open-source development of the pandapipes library, enhancing its functionality and improving simulation capabilities.

Artificial Intelligence Intern   Dec 2024 – Mar 2025
LOGEsoft   *Cottbus, Germany*

- Developed a customized AI pipeline combining neural networks and reinforcement learning to predict fuel compositions with desired properties, enhancing predictive capabilities through end-to-end implementation from data acquisition to model integration.

- Automated predictions with Python and Perl scripts, leveraging a hybrid AI approach for efficient and accurate fuel composition predictions.

LLM Prompt Engineer   Nov 2023 – Dec 2024
Independent Collaboration with Industry Professional   *Remote*

- Created and refined over 1000 natural language prompts for goal-oriented interactions with LLMs, optimizing model performance through supervised fine-tuning and data post-processing.

- Improved AI response accuracy through RLHF by evaluating and correcting AI responses based on rubrics assessing accuracy, instruction following, and efficiency.

- Crafted scenario-based prompts for LLM evaluation and developed test cases to systematically assess model responses, verifying whether they met the defined requirements.

EDUCATION

Master of Science in Artificial Intelligence   Oct 2023 – Current
Brandenburgische Technische Universität

Bachelor of Science in Computer Science   Aug 2019 – June 2023
FAST NUCES

CERTIFICATIONS

Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning   July 2024
DeepLearning.AI

PROJECTS

SMENTRY (NEXT.js, React Native, KERAS TensorFlow)

- Contributed to the development of an access control system utilizing computer vision to detect and authorize resident vehicles' number plates, which resulted in a 25% increase in entry processing efficiency..

- Trained a custom YOLOv8 model and performed OCR, improving detection accuracy and reducing manual entry errors by 30%.

- Integrated the trained model into the web portal front end, streamlining entry management and reducing processing time by 20%.

German Text Classification with DistilBERT: Fast API Deployment and Dockerization (PyTorch, Python)

- Developed a robust text classification solution using DistilBERT, categorizing German phrases within a given dataset. Deployed the model using FAST API, with the entire project containerized using Docker.