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EDUCATION

Friedrich Alexander University

Master of Science in Data Science

Erlangen, Germany

April 2022 – Present

Dr. A.P.J. Abdul Kalam Technical University

Bachelor of Technology in Computer Science

Uttar Pradesh, India

Aug 2015 – July 2019

GPA: 2.4

EXPERIENCE

Mercedes Benz AG

Working and Thesis Student

Stuttgart, Germany

Oct 2023 – Jan 2025

- Developed and optimized the preconditioning feature for the MMA series by leveraging machine learning algorithms, reducing heating and cooling times and enhancing energy efficiency for improved user comfort.
- Performed in-depth analysis of internal vehicle signals, including temperature, humidity, and HVAC system data, to pinpoint key factors impacting preconditioning efficiency, leading to data-driven optimizations that improved system performance.
- Designed and deployed a predictive model using Python and MATLAB/Simulink, reducing heating and cooling times by 15%, enhancing energy efficiency, and optimizing user comfort in vehicle preconditioning.
- Leveraged Vector tools (CANape, CANoe) to visualize and analyze complex vehicle signal data, developing real-time monitoring dashboards that enhanced debugging efficiency and accelerated issue resolution.
- Partnered with cross-functional teams, including hardware engineers and software developers, to seamlessly integrate the machine learning algorithm into the classic AUTOSAR environment, ensuring compatibility, performance optimization, and system stability.
- Conducted rigorous testing and validation in a simulated AUTOSAR network, identifying and resolving critical performance issues across 10 diverse operational scenarios, leading to enhanced algorithm reliability and improved overall system robustness.
- Created comprehensive documentation covering data analysis, model implementation, and testing results, ensuring knowledge transfer, future scalability, and streamlined development for ongoing enhancements.

SAP SE

Working Student

Walldorf, Germany

Sep 2022 – Aug 2023

- Provided support for SAP applications and test automation, leveraging ABAP programming and debugging to enhance system efficiency, resolve issues, and streamline business processes.
- Reviewed and validated documentation to ensure compliance with technical standards, enhancing accuracy, consistency, and regulatory adherence across development processes.

NTT DATA

Software Engineer

Bengaluru, India

Sep 2019 – April 2022

- Collaborated with business stakeholders to gather requirements and optimize data models, improving data accuracy, scalability, and alignment with business objectives.
- Designed, developed, and maintained SAP BW/HANA solutions, including DSOs, InfoCubes, and process chains, optimizing data processing efficiency and enabling seamless business intelligence reporting.
- Developed and optimized ABAP routines to meet user requirements, resolving data discrepancies and improving system accuracy, performance, and reliability.

PROJECTS

Sentiment Analysis API and Web Application

Flask, React, Docker, AWS, CI/CD

- Developed a Sentiment Analysis API using Flask, integrating a pre-trained machine learning model for sentiment prediction.
- Built a React-based front-end web application allowing users to input reviews and get sentiment predictions.
- Containerized the application using Docker and deployed it on AWS Lambda and API Gateway for serverless API hosting.
- Implemented continuous integration and continuous deployment (CI/CD) using GitHub Actions to automate deployment and testing.
- Integrated the application with a front-end user interface for seamless interaction with the sentiment analysis API.

Stock Price Prediction App

Python, PyTorch, FastAPI, Streamlit, WebSocket

- Developed a Transformer-based machine learning model using PyTorch to predict future stock prices based on historical data, achieving high accuracy in price forecasting.
- Built a FastAPI backend to serve predictions and handle real-time data streaming via WebSocket for live stock price updates.
- Created an interactive Streamlit frontend for user input and visualization, integrating Chart.js for real-time and historical

stock price charts.

- Implemented real-time data streaming using Finnhub API and WebSocket to display live stock prices and trade metrics.
- Deployed the app using Ngrok for public access and saved trained models and scalers for seamless integration into the backend.

Github Visualization

Python, Data Visualization

- Developed interactive visualizations of Git log data to analyze project trends over time, providing insights into code contributions, development velocity, and team collaboration patterns.

TECHNICAL SKILLS

- **Programming Languages:** Python, MATLAB/Simulink, SQL, JavaScript (React), HTML, CSS
- **Tools and Technologies:** Docker, AWS, Flask, React, Git, GitHub Actions, CI/CD, PyCharm, AWS Lambda, API Gateway, S3, Flask-CORS, Tableau, PowerBI
- **Data Science and Machine Learning:** Predictive modeling, Data analysis, Collaborative filtering, Machine Learning, Statistics, Optimization, Simulation
- **SAP:** SAP BW/HANA, SAP BW, DSOs, ABAP programming, Infocubes, Process chains, ABAP routines