Vivek Padayattil

Curriculum Vitae

Data Scientist with a solid background in Mechatronics, Machine Learning and MLOps. Adept at analyzing, interpreting, and visualizing insights from large datasets with clarity. Experienced in signal processing and proficient in working with sensor-derived health and wellness datasets to extract meaningful insights. Experience in implementing MLOps pipelines, model deployment, and development process optimization. Strong cross-functional collaboration experience with product, marketing, and mobile development teams. Holder of Azure Data Scientist Associate certification.

Personal Information

Date of Birth	May 12th, 1994
Gender	Male
Nationality	Indian
Visa	Blue Card
Address	Markgrafenweg 4, Günzburg 89312
Contact	+49 1727026761
E-mail	vivekpadayattil@gmail.com

Experience

Work Experience

06/2023 - Present — **Data Scientist,** *VitaScale GmbH,* Mainz, Germany

- Simulated and analyzed test series for automotive and medical applications using Famos and Python; managed sensor data using MySQL
- Developed a continuous blood alcohol concentration prediction model using electrochemical sensors with 88% accuracy
- Built and managed ML lifecycle using MLflow; implemented CI/CD workflows for preprocessing and training
- Created desktop GUIs using PyQt and Tkinter to extract and visualize sensor data
- Analyzed audience behavior and engagement metrics to run a data-driven Meta ad campaign, optimizing targeting strategies through A/B testing and performance analysis; designed a landing page integrated with campaign analytics to support a crowdfunding initiative

07/2016 - 08/2018 — **Procurement Engineer,** *Furnace Fabrica India Ltd,* Navi Mumbai, India

- Demonstrated sound expertise in inventory management, ERP systems, and quality control
- Successfully spearheaded procurement plans, vendor development, and departmental coordination for multiple national and international projects

Research and Projects

02/2022 - 11/2022   **Master Thesis,** *FPGA Prototype of Neural Network Based Cardiovascular Disease Detection for Rescue Patients*, University of Siegen

- o Built and deployed a neural network on Pynq Z2 using Apache TVM for real-time prediction
- o Visualized key metrics using Tableau and implemented model comparison (ANN vs. SVM, GBM, RF)

09/2020 - 08/2021   **Master Project,** *Deep Embedded Clustering of Bars and Wires Hot Rolling Parameters*, University of Siegen

- o Clustered hot rolling process parameters using Deep Embedded Clustering architecture; implemented unsupervised learning for material classification

Audio transcription tool (Github)

- o Developed a Django-based tool using Hugging Face model
- o Deployed on Render with CI/CD automation using GitHub Actions

Sentiment Analysis App (Github)

- o GUI app with Tkinter for classifying tweet sentiment using NLP features and ML classifiers

Education

2018 - 2022	**Master of Science in Mechatronics,** *University of Siegen, Germany*
2012 - 2016	**Bachelor of Engineering in Mechanical,** *Univeristy of Mumbai, India*

Technical Skills

Languages	Python, SQL, Matlab, C++, JavaScript
AI/ML	Pandas, Apache Spark, Numpy, Scikit-learn, TensorFlow, PyTorch, Keras, Hugging Face, LangChain, NLTK
Cloud & DevOps	Azure, MLflow, Docker, GitHub Actions, Git, Render, Pinecone, REST APIs
Frameworks	Django, Flask, PyQt, Tkinter
Visualization	Tableau, Seaborn, Matplotlib, Plotly
Tools	Git, Linux, Carrd, Agile-SCRUM, Latex, Microsoft Office
AI Hardware Inference	Apache TVM, Vitis AI

Languages

Fluent	English, Malayalam, Hindi, Marathi	
Intermediate	German (B1/B2)	Fluent in communicative aspect

Courses and Licences

- o Azure Data Scientist Associate *(Microsoft Certified)*
- o Neural Networks and Deep Learning *(Coursera)*
- o Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization *(Coursera)*
- o Convolutional Neural Network *(Coursera)*