Mayank Prasad

Data Science | Machine Learning Engineer

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SUMMARY

Data Science Engineer with over 6+ years of experience ensuring data correctness, deploying complex machine learning and statistical modelling algorithm for identifying patterns and extracting valuable insights with domain understanding. Demonstrated ability to effectively engage with technical professionals and end users to identify and translate business requirements. Proven ability to manage group of talented professionals to develop valuable process solutions that satisfy business objectives. the automotive industry.

SKILLS

Data Science Engineer | Python Developer for Battery Analysis for EQ series Electric Vehicle.

Languages	: Python, MATLAB scripting (Adaptable to other scripting languages)
Libraries | EDA | ETL	: Pandas, Seaborn, Matplotlib, Numpy, Rest API, Fast API, SQL,
Machine Learning Model	: Scikit-Learn, Linear Regression, Logistic Regression, Random Forest, TensorFlow, NLP, KNN, XGBoost, LLM, Probability & statistics
CS Fundamental	: Object Oriented Programming (OOPs) , Data Structures and Algorithm, Design Patterns, System Design, and CICD (Jenkins, Gitlab)
Work Specialization	: Tools Development, Requirement Engineering, Agile, Azure, AWS SageMaker
Project Management	: JIRA, Confluence, Gantt Chart, Power BI
Version Control	: GIT, Tortoise SVN

WORK EXPERIENCE

Senior Data Science Engineer [SDE 2]
Mercedes Benz R&D India **August 2017 – Present [6.5 years]**

- Played role of individual contributor in providing Data Analysis solutions for Battery Ageing.
- Deploying complex machine learning and statistical modelling algorithm.
- Open AI projects Hands on, LangChain, Llama model (Image to text and text to image). Prompt engineering
- Developed end to end DAIMLER inhouse Data Science software/Application for Battery Analysis.
- Integration of cross platform Python - MATLAB Application development, Requirement gathering and setting up CICD for multiple applications.
- Team Leadership, Requirement Gathering from onsite team, Managing a Battery Analysis team (of 5)
- Unit testing during the course of development of application.
- Close collaboration within the team and with counterparts in Germany.
- Experience with various project management tools like JIRA, Confluence, Gantt chart, Git Release, Jenkins.

PROJECTS

Cell Ageing Analysis *[Role : EDA, Classification, Modelling and Visualization]*

- Developed Data Analysis system to forecast the age of battery cells from various vendors using XGBoost ML model.
- Application uses empirical ageing modelling from the cell measurement data to forecast battery degradation and aging of the battery 10 years in advance, Classification of cell for various AMG car lineups, Azure, Power BI for visualization.
- Achieved enhanced and accelerated cell selection, thus saving significant cost and time of the diagnosis team.

Thermal Model Configuration Analysis *[Role : EDA, classification and modelling + Simulation]*

- Developed Data Analysis approach in optimizing battery thermal management for electric vehicles by combining field data using Gradient Boost for classification and Regression for thermal cooling process, AWS SageMaker for deployment.
- Application uses supervised and unsupervised learning for rapidly generating accurate models while minimizing human error and model creation time from 720 hours to < 5 hour.
- Simulating the generated data in Simulink model using MATLAB for verification.

Mission Profile *[Role : EDA, Application, Backend development, CICD]*

- Creation of driving profile and power profile for battery variants to ensure battery robustness.
- Designed power profiles for lifetime simulation of battery capacity used as input for robustness.
- Automated end to end application development and deployment to multiple departments using CICD.

EDUCATION

Bachelor of Engineering, Computer Science, **The National Institute of Engineering**, Mysore, India 2013-2017, CGPA **8.02**
Delhi Public School, Bokaro, India Class 12 {Science} : 2011-2013, **80%** | **DPS Bokaro** Class 10 : 1999-2011, **90%**

CERTIFICATION:

Python | Data Science: EDA , ETL (Gathering, Cleaning), Classification, Modelling | Power BI | MATLAB-Simulink | German A2

LEISURE PURSUITS:

Travelling, Home Automation, Cooking, Badminton, Factual Learning, Finance