KARTHIKEYA PERVELA

Analyst – Data Science

8328213879
pervela.karthikeya@gmail.com
github.com/in/pkarthikeya1
linkedin.com/in/karthikeya-pe

EDUCATION

INDIAN INSTITUTE OF TECHNOLOGY - KANPUR
M.Tech (2024) – 7.38/10
Machine Learning, Mathematics and computational methods

MALLAREDDY COLLEGE OF TECHNOLOGY
B. Tech (2017) – 67.56 %

SKILLS

Data Analysis & Modeling: Linear & Logistic Regression, Decision Trees, Gradient Boosted Machines, Random Forests, XGBoost

Statistical Techniques: Exploratory Data Analysis (EDA), Feature Engineering, Ensemble Learning

Tools & Languages: **Python, SQL, BigQuery**

Data Manipulation: Pandas, NumPy

Data Visualization: Matplotlib, **PowerPoint**

Soft Skills: **Excellent communication, Attention to detail, Problem-solving**

OTHERS

Certifications: Supervised Learning (Coursera),
Python for Data Science & ML (Udemy)

Awards: AICTE PG scholarship 2021-2023**,**
AIR 278 in GATE exam out of 5000+ participants (2021)

EXPERIENCE

DATA SCIENTIST

Saint Gobain/ Chennai / Jan 2024 – Apr 2024

- Responsible for **actively developing tailored** Regression and **active learning**-based **machine learning problems by adapting existing research**
- **Collaborating** closely with R&D engineers to understand intricate business prob lems and translate them into actionable data science problem and develop effici ent models, generate insights, improved prediction accuracy based on feedback
- **Applied** advanced optimization techniques to **streamline** experimental processes, **reducing** development cycles and **aligning** data-driven solutions with project objectives

DATA ANALYST

Saint Gobain / Chennai / Aug 2023 – Dec 2023

- **Conducted** data analysis to improve manufacturing line efficiency by **cleaning** and **aggregating** large datasets
- **Collaborated** with process and operations teams to **identify** key parameters affecting energy consumption and **visualize** trends
- **Enabled** the processing and operations teams to **identify** inefficiencies, contributing to significant cost-saving opportunities

PROJECTS

OPTIMIZATION OF MATERIALS COMPOSTION USING BO (Professional)

- The R&D team relied on conventional processes for material composition optimization, which often required experimental iterations per development cycle, leading to extended product development timelines
- **Optimize** the experimental process by developing machine learning models to predict material compositions while reducing the number of required iterations
- **Engineered** a comprehensive ML solution using **Python, Scikit-Learn, and Bayesian Optimization** with bootstrap sampling of 1000 **SVM** models (RBF kernel), incorporating electron configuration-based **feature engineering** and independent data processing
- **Achieved 57% improvement** in model performance (R^2 from 0.45 to 0.71) while **reducing** experimental iterations **by 70% (from 17 to 5), significantly accelerating the product development timeline**

ECONOMIZNG THE ENERGY CONSUMPTION (Professional)

- The processing and operations teams struggled to identify inefficiencies in the manufacturing line due to the complexity of large datasets
- Clean and aggregate large datasets to identify key parameters affecting energy consumption and visualize trends
- Cleaned and aggregated 500,000+ records of sensor and product data using Python, segmented data based on operational time and performed correlational analysis to identify key parameters affecting energy consumption. Created visualizations in Plotly to enable the processing and operations teams to uncover inefficiencies
- Enabled the processing and operations teams to identify inefficiencies, leading to potential annual savings of ₹1.2 million