

PROFESSIONAL SUMMARY

Data Scientist with 2+ experience working in Oil and Gas, Renewable energy and maritime domains. Worked on time-series forecasting, predictive maintenance and operation research problems. Experienced in developing quantitative feature engineering algorithms and manipulating data to improve ML model performance. Experienced in supply chain optimization and Operation Research libraries in Python.

Education: Dual Degree (B.tech +M.tech) in Engineering (Ocean Engg:) ,IIT Kharagpur (2014-2019)

SKILLS AND EXPERTISES

Certifications: Python for AI -IBM Certification | Introduction to SQL -Datacamp| Machine Learning Specialization-Stanford Online | DSA-Udacity | Statistics-LinkedIn Learning

Languages: C |C++ | Java | MATLAB| Python | SQL

Libraries: Numpy | Pandas| PuLp| scipy | spacy| Tensorflow | Keras| Scikit | Pyomo

Academic Courses: Advanced Calculus | Calculus |Machine Learning | Operations Research| Network Analysis.

WORK EXPERIENCE

BlueAI-Labs-AI Consulting Services | Data Scientist **Sep 2022 - Present**

Office Space Allocation – Adaptt Intelligence

- Leveraged tabu search algorithm and clustering algorithms k-means-mediod to optimize office space allocation based on departmental synergies and employee attributes, resulting in a more collaborative and work environment.
- The project resulted in a 15% reduction in real estate costs and a 20% increase in cross-departmental collaboration, demonstrating the ability to apply technical expertise to drive business outcomes.

Exercise and Stress Intensity analysis using ECG – University Hertfordshire

- Developed a statistical model using ECG R peak values to determine stress and exercise intensity, leveraging time-series analysis methods such as noise filtering, regression and peak detection.
- Found correlation of RR interval with intensity and used the correlation coefficient to estimate intensity with better accuracy than conventional pulse rate monitoring method.

Climate Connect Digital| Data Scientist -Apprenticeship **Jun 2022- Aug 2022**

Time-series forecasting:

- Statistical analysis of load and weather data and feature engineered new features and forecasted day ahead electricity demand using ensemble learning algorithm.
- Day Ahead market forecasting of Indian Energy Exchange Market, compared performance of deep learning LSTM and XG-boost for time-series forecasting of energy markets.

Predictive Maintenance of wind turbine bearing:

- Researched predictive maintenance methodology of wind turbines and developed a machine-learning model for predicting bearing temperature and improved accuracy of the by feature engineering, binning methods based on various operating regimes.

ExxonMobil Corporation, BTC| Inspection Optimization Engineer **Jul 2019 - Jan 2021**

Pipeline Inspection Data Analysis and Management

- Analysis of pipeline maintenance cost, work order data across various business units and created a roadmap for an automation tool to optimize, reduced maintenance costs across EM pipeline assets.
- Built Matlab tool for automation of various empirical assessments to calculate the risk matrix of assets.
- Used pressure sensor data in Early warning System statistical models to predict remaining life of pipelines.
- Inline inspection analysis of pipeline corrosion data and predicting the corrosion growth by using corrosion growth statistical models to give insights on risks and recommending various maintenance strategies.

PROJECTS

EV Charging infrastructure Optimization | Shell AI Hackathon

Forecasted demand and optimized supply over region to minimize various cost functions by genetic algorithms and Linear programming solvers in Pulp Library.

Computational analysis of drag on underwater vehicle| Master Thesis

Calculated drag force on underwater body by computational fluid dynamics numerical models.

Non-linear Structural Analysis of Corroded Pipelines |Bachelor Thesis

Developed non-linear finite element methodology using linear regression to calculate the residual strength of pipeline and compared it with the existing empirical models for corroded pipelines

