Durvesh Baharwal
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EDUCATION

Bachelor of Engineering (B.E.) in Artificial Intelligence and Data Science
All India Shri Shivaji Society's Institute of Information Technology, Pune | **05/2024 | CGPA**: 7.76

EXPERIENCE

Indian Space Research Organization (ISRO)
Research Intern | 07/2023 – 12/2023

- Developed and deployed a Kalman Filter algorithm for satellite navigation, boosting positioning accuracy by 37%.
- Created a MATLAB simulation for the Moving Window Average techniqueand achieved a 36% increase in processing speed.
- Enhanced data accuracy across over 100 test runs.

PROJECTS

1. Titanic Survival Analysis

- Applied data wrangling, feature engineering, and machine learning on 9,000+ data points.
- Improved accuracy to 67% using logistic regression and decision trees.
- Conducted over 5 cross-validation tests for model optimization.
- *Skills*: Data Cleaning, Feature Engineering, Logistic Regression, Decision Trees, Python (pandas, scikit-learn)

2. Alpine Trekkers Dashboard (Power BI)

- Developed an interactive Power BI dashboard to analyze 4 years of trekking participation data.
- Analyzed customer demographics and revenue trends for data-driven insights for 40+ events.
- Provided key metrics and sales trends, supporting marketing and package development for 28,000+ customers.
- *Skills*: Data Visualization, Customer Insights, Dashboard Design, Power BI

3. Seismic Event Detection Across the Solar System

- Programmed a Python algorithm for detecting seismic events in 24-hour periodic noisy data from Apollo and Mars InSight missions.
- Applied noise filtering, least squares fitting, and backtracking and more 7 techniques.
- Achieved 96% accuracy in peak detection, optimizing data transmission efficiency.
- *Skills*: Seismic Data Analysis, Python, Noise Filtering, Moving Average, Least Squares Fitting, Quadratic Model

4. Enhancing GPS Positioning Accuracy using Machine Learning

- Designed and deployed a hybrid GNSS positioning system, achieving 4.48m positional accuracy:
- Combined Least Square Estimation with Machine Learning techniques.
- Reduced Mean Absolute Error in Random Forest Regression to 0.000122 for improved model accuracy.
- *Skills*: GNSS, Machine Learning, Random Forest, Least Square Estimation, GPS Accuracy Enhancement

PUBLICATIONS

- **Enhancing GPS Positioning Accuracy Using Machine Learning Regression** Vol. 4, No. 1, June2024, pp. 01~06, ISSN: 2583-1224.
- Engineering International Journal of Technology Engineering, Mathematics Science 06/2024

SKILLS

- **Programming & Analysis**: Python, Power BI, SQL, pandas, scikit-learn.
- **Data Science & Machine Learning**: Regression Analysis, Classification (Logistic Regression, Decision Trees), Feature Engineering
- **Data Visualization**: Power BI, Data Cleaning, EDA
- **Additional Skills**: GNSS Positioning, Statistical Analysis, Dashboard Design, Model Evaluation

CERTIFICATIONS & COURSES

- **AWS Academy Graduate**: AWS Cloud Foundations
- **IT Training Institute**: Certified Data Anaylst.
- **Kaggle**: Python
- **Oracle**: Certified Database Programming with PL/SQL, Certified AI with ML in Java
- **HackerRank**: SQL (Basic to Advanced), Python (Basic), CSS (Basic), JavaScript (Basic to Intermediate)

ACHIEVEMENTS & PARTICIPATIONS

- Competed in NASA's Space Apps Challenge 2023 & 2024 among 1200+ participants.
- Presented at *MindForge*, DYPIEMR Pune, to industry experts.
- Led graphic design for 10+ events, achieving a 50% social media engagement boost.
- Guided 50+ treks in the Sahyadri range, managing teams of 75+, leading recruitment for Alpine Trekkers.
- Received a letter of recommendation from the head of Scientific Research and Training Division at SAC ISRO.

PUBLICATION

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● Enhancing GPS Positioning Accuracy Using Machine Learning Regression Vol. 4, No. 1, June2024, pp. 01~06, ISSN: 2583-1224.