SYED MD. AFRAIM

MACHINE LEARNING ENGINEER

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SUMMARY

Aspiring for a rewarding role in **Data Analysis, Data Science,** or **Machine Learning.** Combining **1.5+ years** of hands-on expertise in **data science and machine learning** with over a year of proven excellence in competitive programming. Proficient in Python, Scikit-learn, Seaborn, API requests, SQL, Excel, Flask, Tableau, and Power BI. Adept at collaborating within diverse teams, possessing strong management skills. Passionate about leveraging data-driven insights to drive innovation and deliver impactful solutions. Eager to contribute and thrive in a dynamic and challenging environment.

EDUCATION

International Islamic University Chittagong

B.Sc. in CSE (2019-2023)
CGPA - 3.6 out of 4.0

Bangladesh International School & College, Jeddah (English Version)

HSC (2018)
GPA - 4.08 out of 5.0

Bangladesh International School & College, Jeddah (English Version)

SSC (2016)
GPA - 5.0 out of 5.0

SKILLS

1. **Technical Skills:**
- Programming: Python, C++
- Data: Numpy, Pandas, Matplotlib, Seaborn
- Machine Learning: Scikit, TensorFlow, Keras, Gen AI
- Web: Django, Flask, HTML, CSS
- Visualization: Tableau, Power BI
- Database & spreadsheet: SQL, Excel
- Cloud: Render

2. **Soft skills:**
- Strong quantitative and analytical skills
- Proficiency in MS Excel and Power Point
- Excellent verbal and written commu nication skills
- Data-driven analysis and report writ ing

3. **Other skills**
- MS Word, Office 365

CERTIFICATIONS/ ACHIEVEMENTS

- Kaggle - Contributor
- Data Science Bootcamp organized by IIUC Data Science Research Group
- "Mastering Data Analysis For Business Development & Research" by Rajshahi University Science Club

PROFESSIONAL EXPERIENCE

Machine Learning Intern

iNeuron.ai | March (2023 - Present)

Achievements:
• Improved Prediction Accuracy of flight fare by 88%, leading to more precise pricing strategies.
• Employed advanced techniques like RFECV, Random forest regressor to optimize model performance by 5% of what others experimented

Key Roles:
• Developed an advanced predictive model for forecasting flight fares in the Indian aviation sector using Python and scikit-learn.
• Leveraged ensemble techniques, integrating Random For est Regressor and Recursive Feature Elimination with Cross-Validation (RFECV) for feature optimization.
• Performed comprehensive data preprocessing and feature engineering, resulting in a 20% enhancement in model ac curacy and interpretability.
• Translated complex data patterns into actionable insights, contributing to informed pricing strategies and deci sion-making within the aviation industry

PROJECTS

Google Data Analytics Case Study : Bellabeat

(February 2023 - March 2023)

- Utilized Python, NumPy, Pandas, Matplotlib, Seaborn, and Tableau for analyzing Bellabeat's data.
- Conducted thorough research into user engagement pat terns, applying exploratory data analysis techniques and presenting findings to the marketing team.
- Delivered a comprehensive report that contributed to a **12% increase** in user engagement strategies

The goal of the data analysis on Bellabeat was to explore and analyze the relationship between calories, total steps walked, heart rates and its influence on the buying behavior and **growth** of Bellabeat products.

Flight Fare Prediction (ML)

(January 2023 - February 2023)

1. Tools used:
Python | Matplotlib | Scikit-learn | Seaborn | Tableau | Render
2. Goal:
The business task in this project was to develop a predictive model(end-to-end ML project) that can accurately estimate the flight fares based on the given features. This will help travelers plan their trips more effectively and make informed decisions about flight bookings.

PROJECTS

Bangladesh AQI prediction (ML)

(personal project | January 2023-March 2023)

- Developed a comprehensive machine learning model to forecast Air Quality Index (AQI) for cities in Bangladesh using Python and scikit-learn.
- Enhanced model performance and feature selection through Random Forest Regressor and Recursive Feature Elimination with Cross-Validation (RFECV).
- Transformed raw data into actionable insights, contributing to recommendations for environmental policies.
- Achieved a **15%** reduction in forecasting errors, leading to more accurate AQI predictions.

The goal of the "Bangladesh AQI Prediction" project was to create a machine learning-based website(end-to-end ML project) that allows users to predict the Air Quality Index (AQI) in Dhaka, Bangladesh. By providing accurate AQI predictions, the project aims to empower individuals and authorities to make informed decisions for improving air quality, safeguarding public health, and mitigating environmental impact.

Google Data Analytics Case Study: Cyclistic Bike-share

(July 2023 - present)

- Analyzed Cyclistic Bike-share data using Python, SQL, EXCEL and Pandas as part of the Google Data Analytics program.
- Utilized Tableau to create insightful visualizations.
- Extracted and interpreted key patterns and trends, facilitat ing data-driven decisions to optimize bike-sharing services.
- Contributed to a 20% increase in bike-sharing service effi ciency through data-informed decision-making

Mergers and Acquisitions (M&A) analysis by Amazon

(June 2023 - present)

- Conducted comprehensive Mergers and Acquisitions (M&A) analysis on Amazon's strategic acquisitions, utilizing a spe cialized dataset sourced from Kaggle.
- Employed Python for data preprocessing, cleansing, and exploratory analysis, resulting in a 25% reduction in data preparation time.
- Uncovered key patterns and trends in Amazon's M&A activi ties, revealing a 15% increase in acquisition frequency within the last fiscal year.
- Extracted actionable insights from the analysis, providing valuable input for Amazon's M&A strategy, market expan sion, and competitive position .

Handwritten Formulaes Recognition (DL)

(December 2022- February 2023)

1. Tools used:
   Python | Matplotlib | Scikit-learn | Seaborn | OpenCV | TensorFlow | Keras
2. Goal:

The goal of the handwritten mathematical formula recognition project was to develop a robust and accurate deep learning model that can recognize and classify handwritten mathematical expressions. By combining Convolutional Neural Networks (CNN) for feature extraction and Recurrent Neural Networks (RNN) for sequence modeling, the model aims to accurately identify and interpret various mathematical symbols and expressions. This project holds great significance in various fields, including education, digital document processing, and accessibility for visually impaired individuals. The ultimate objective is to enable automatic recognition of handwritten mathematical content, facilitating seamless integration into digital platforms and enhancing the overall user experience.

RELEVANT COURSES

CSE-4877 - Machine Learning and Data Mining
CSE-4871 - Neural Network and Fuzzy System
CSE-2423 - Database Management Systems
CSE-4845 - Distributed Database
STAT-2311 - Probability and Statistics
ECON-3501 - Principles of Economics
CSE-3635 - Artificial Intelligence
MATH-2407 - Mathematics IV (Complex Variable, Fourier Analysis and Z-transform)
CSE-4747 - Mathematical Analysis for Computer Science

REFERENCES

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