SHEIKH FARHAN

B.Tech.
CSE - DS
Haldia Institute Of Technology
Portfolio

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Education

- **Haldia Institute Of Technology** *November 2022 - June 2026*
  Bachelor of Technology - Computer Science and Engineering(DS); GPA: 7.65 Purba Medinipur, India

Skills

- **Programming Languages:**: C , Java , Python
- **Libraries & Frameworks:**: Mathplotlib, Seaborn, Pandas, Numpy, Scikit-Learn, Tensorflow, Keras
- **Development:**: Django, Flask, Docker, MySQL
- **Data Science & Machine Learning:**: Supervised & Unsupervised Learning, Feature Engineering, Natural Language Processing (NLP), Deep Learning(CNN, ANN, LSTM)
- **Version Control:**: Git, GitHub
- **Deployment:**: Render, Railway , AWS(beginner)

Projects

•Sentiment Analysis of Tweets *Jan 2025 - Feb 2025*

- **Objective:** Developed a Machine Learning (ML) model to analyze the sentiment of tweets, classifying them as **positive, negative, or neutral**. This project is applicable in **brand monitoring, customer feedback analysis, stock market predictions, and political sentiment analysis**.
- **Solution:**
  - Collected real-time tweets using the **Twitter API (Tweepy)**.
  - Preprocessed text using **Natural Language Processing (NLP)** techniques such as tokenization, stopword removal, and lemmatization, reducing vocabulary size by 40% for better generalization.
  - Implemented multiple ML models for sentiment classification, achieving **93.57% accuracy** using algorithms like **Random Forest algorithm, Naïve Bayes, Support Vector Machines (SVM), and Ensemble Techniques**.
  - Built and deployed a **Django-based web application**, hosting it live on **Render**. Visualized insights with Matplotlib & Seaborn, identifying sentiment trends across **10+ industry sectors**.
- **Conclusion:** This project enables real-time sentiment analysis of Twitter data, providing valuable insights for business decision-making, market analysis, and public opinion tracking.

Tea Sickness Analysis and Management System Jan 2025 - Feb 2025

- **Objective:** The aim of this system is to **automate the health monitoring** of tea plants and provide **disease management recommendations**, helping farmers optimize their yields and reduce losses caused by plant diseases.
- **Solution:**
  - Tea plantations face 147 million kg crop losses due to common diseases such as **anthracnose, red leaf spot, algal leaf, brown blight, bird eye spot, white spot**, and **gray light**,and Improper Management Systems.
  - The system uses a **Convolutional Neural Network (CNN)** to classify these diseases with an accuracy of **84.27%**.
  - Based on the identified disease, the system provides relevant **cure suggestions**. Implementing this system has the potential to **increase farmers' yields by 25%** and could result in a **3% increase** in national tea export volumes.

  Additionally, I built and deployed a **Django-based web application**, hosted live on **Railway**, which diagnoses tea plant diseases and offers a **management system** to enhance modern agricultural techniques.

Certifications

- **Data Analysis with Python**, IBM · Course *Nov 2024*
- **Supervised Machine Learning: Regression and Classification**, Coursera *Aug 11, 2024*

Achievements & Participations

- ,Vice Captain of Departmental Football,Volleyball Team
- , Selected in Smart India Hackerthon 2024
- , Active Kaggle Contributer