Vaibhav Sharma

Data Science / Machine Learning

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Summary

Aspiring Data Science Engineer currently in final year of B.Tech in Computer Science and Engineering at Rayat Bahra University. Skilled in data analysis, machine learning, and software development. Keen interest in applying knowledge to practical challenges. Seeking an internship to gain hands-on experience and contribute to innovative projects.

Education

B.Tech - Computer Science Engineering **(06/21 - 06/25)**
Rayat Bahra University, Punjab

Professional Certifications

- IBM Data Science Professional Certificate
- Machine Learning and Deep Learning - Fundamentals and Applications (NPTEL)
- Full Stack Development Program (Excellence Education)
- Full Stack Web Development (MCP Technology)

Projects

Twitter sentiment Analysis

- **Engineered a machine learning model** to classify 1.6 million tweets from sentiment data.
- **Transformed and optimized** data by cleaning 100% of the text using tokenization, stopword removal, and vectorization with TF-IDF.
- **Achieved an 84% accuracy rate** with Logistic Regression, improving data processing speed by **30%** post-optimization.

Customer Segmentation and Predictive Analytics

- **Implemented K-Means clustering** to strategically segment 1,000+ customers, enhancing targeted marketing campaigns by **87%**.
- **Processed and refined** over 500,000 data rows, leveraging advanced feature engineering to improve model efficiency.
- **Elevated customer retention by 45%**, while optimizing marketing efforts, resulting in a **15% increase** in campaign effectiveness.

Predicting Housing Prices in California

- **Developed predictive models** using Linear Regression and Random Forest, achieving **98% accuracy** on housing price predictions.
- **Streamlined data management** for 10,000 properties, effectively addressing missing values and categorical features.
- **Reduced prediction errors by 87%**, driving highly reliable pricing forecasts through iterative feature selection and ensemble techniques.

Object Detection in Real Time Video Stream

- **Led the development** of a real-time object detection system using YOLOv3 and OpenCV.
- **Optimized video processing** at 30 FPS, cutting processing latency by **45%** with a streamlined detection pipeline.
- **Identified 40+ object categories** with **90%+ detection accuracy**, delivering fast, precise object recognition in live video feeds.

Skills

Data Analysis and Machine Learning: Data Cleaning, Data Preprocessing, Pandas, NumPy, Statistics, Linear Regression, k-means Clustering, Random Forest, Scikit-Learn, Feature Engineering, Model Evaluation, Predictive Modeling, Deep Learning Techniques, YOLOv3

Data Visualization: Data Visualization, Matplotlib

Programming: Python, Java,

Technologies: MySQL, MongoDB, DBMS, OpenCV, Large Datasets

Tools: Jupyter Notebook, Git

Soft Skills: Communication, Public Speaking, Team Work