

# Vaibhav Sharma

## Data Science / Machine Learning

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Aspiring Data Science Engineer currently in final year of B.Tech in Computer Science and Engineering at Rayat Bahara 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.

## Projects

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### Twitter sentiment Analysis

- Built a machine learning model to classify 1.6 million tweets from the Sentiment dataset.
- Pre-processed data by cleaning text and using vectorization; trained a Logistic Regression model.
- Achieved high accuracy and robust performance, gaining insights into public sentiment across various topics.

### Customer Segmentation and Predictive Analytics

- Applied K-Means clustering to segment customers based on buying behavior.
- Extracted meaningful insights from complex customer data with thorough data cleaning and feature engineering.
- Optimized marketing strategies through iterative model refinement.

### Predicting Housing Prices in California

- Predicted housing prices using Linear Regression and Random Forest models.
- Handled categorical variables and large-scale data preprocessing effectively.
- Achieved accurate price predictions through robust preprocessing and ensemble modeling.

### Object Detection in Real Time Video Stream

- Developed a real-time object detection application using YOLOv3 and OpenCV.
- Implemented efficient frame processing and visualization for live object classification.
- Optimized system performance with adjustable model parameters and real-time display.

## Education

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### B.Tech - Computer Science Engineering

(06/21 - 06/25)

Rayat Bahara 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)

## Skills & abilities

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**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 (You Look Only Once)

**Data Management and Visualization:** Data visualization, Matplotlib, Large datasets, MySQL, MongoDB, DBMS, Jupyter Notebook, OpenCV.

**Programming and Tools:** Python, Git

**Soft Skills:** Problem Solving, Communication