

# VISHAL

Bachelor Of Technology  
Computer Science And Engineering  
Rayat Bahra University, Mohali,Punjab

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## EDUCATION

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### •Rayat Bahra University Mohali,Punjab

*Btech - Computer Science And Engineering*

2021-2025

CGPA: 7.86

### •Professional Certificates

IBM Data Science Professional Certificate (IBM)

Machine Learning and Deep Learning – Fundamentals and Applications (NPTEL)

Full Stack Development Program (Excellence Education)

Full Stack Web Development (MCP Technology)

## PROJECTS

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### •Resume Categorization

*Built a resume categorization system to classify resumes into job profiles..*

- Cleaned and preprocessed 1,000+ resumes by normalizing text and removing special characters. Transformed resumes into numerical features using TF-IDF vectorization, resulting in a feature matrix of size 1,000 x 10,000. Encoded 25 job categories with LabelEncoder for model training.
- Built a K-Nearest Neighbors (KNN) classifier using the One-vs-Rest strategy for multi-class classification, achieving an accuracy score of 85%..
- Visualized job profile distributions with count plots and pie charts, representing 25 distinct job profiles.
- Developed a prediction function to categorize resumes, successfully classifying new resume samples with high accuracy.

### •Spam Comment Detection

*Developed a spam detection system using TF-IDF vectorization and Logistic Regression, achieving 92% accuracy in classifying comments*

- Preprocessed 10,000+ comments by handling missing values and extracting features from dates.
- Visualized data distribution and generated a correlation heatmap.
- Vectorized text using TF-IDF with 1,000 features.
- Trained a Logistic Regression model and achieved 92% accuracy in spam detection.

### •Credit Card Fraud Detection

*Developed a machine learning model to detect fraudulent credit card transactions from a highly imbalanced dataset..*

- Preprocessed data by cleaning and standardizing features, and addressed class imbalance..
- Analyzed fraud rate (0.17%) and dataset characteristics through exploratory data analysis.
- Applied Logistic Regression, Decision Tree, and Random Forest classifiers, achieving robust performance with Random Forest, and evaluated using accuracy, precision, recall, and F1-score.

### •Student Management System

*Developed a backend Student Management System using Python and SQL for efficient student data management and retrieval..*

- Designed and developed a scalable backend system for managing student information using Python and MySQL..
- Created a robust database solution with efficient data retrieval and manipulation techniques to optimize system performance.

## TECHNICAL SKILLS AND INTERESTS

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**Languages:** Python

**Frameworks/Libraries:** Pandas, Scikit-learn, Seaborn, Matplotlib, NumPy

**Cloud/Databases:** MongoDB,SQL

**Data Analysis and Engineering's:** Data Analysis, Data Cleaning, Feature Engineering, Model Evaluation, Machine Learning Algorithms

**Soft Skills:** Problem Solving, Effective Communication,Leadership, Agile Learner.