# Ishaan Vats

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## Education

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| • **Shaheed Sukhdev College of Business Studies, University of Delhi** | 2024 – Present |

B.Sc. (Hons.) Computer Science
CGPA: 6.45

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| • **St. Xavier's Senior Secondary School, Raj Niwas Marg, Civil Lines, Delhi – 110054** | 2024 |

Commerce stream with Mathematics and Informatics Practices

## Projects

**Credit Risk Default Prediction** — GitHub
- Built a supervised classification model to predict loan default risk using financial and customer features.
- Performed data preprocessing, feature engineering, and model evaluation using metrics such as accuracy and ROC-AUC.
- Implemented models including Logistic Regression and Random Forest to optimize predictive performance.

**Telco Customer Churn Prediction** — GitHub
- Developed a machine learning pipeline to predict customer churn using classification algorithms.
- Conducted exploratory data analysis (EDA) and handled class imbalance through preprocessing techniques.
- Improved retention prediction accuracy using ensemble learning methods.

**Restaurant Reviews Sentiment Analysis (NLP)** — GitHub
- Built a sentiment classification model using NLP techniques including text cleaning, tokenization, and vectorization (TF-IDF).
- Trained and evaluated classifiers such as Naive Bayes and Logistic Regression.
- Achieved high classification accuracy on labeled restaurant review dataset.

**Resume Classification using Machine Learning** — GitHub
- Implemented a text classification system to categorize resumes into job domains.
- Applied NLP preprocessing, feature extraction, and supervised learning techniques.
- Evaluated performance using confusion matrix and classification metrics.

**Country Clustering using Unsupervised Learning** — GitHub
- Applied K-Means clustering to group countries based on socio-economic indicators.
- Performed feature scaling and dimensionality reduction for improved clustering performance.
- Visualized clusters using PCA-based 2D projection.

## Technical Skills

**Programming:** Python, C++, SQL
**Machine Learning:** Scikit-learn, Supervised & Unsupervised Learning, Model Evaluation
**NLP:** TF-IDF, Text Preprocessing, Sentiment Analysis
**Data Analysis:** Pandas, NumPy, Matplotlib, Seaborn
**Tools:** Jupyter Notebook, Git, GitHub

## Positions of Responsibility

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| **Class Representative (CR), Shaheed Sukhdev College of Business Studies** | 2024 – Present |

- Acted as the primary communication bridge between students and faculty for academic coordination.

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| **Prefect, St. Xavier's Senior Secondary School** | Apr 2023 – Jan 2024 |

- Assisted school administration in student coordination and event execution.