

# Amreeta Surana

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## EDUCATION

**VIT Bhopal University**  
BTech – CSE (Artificial Intelligence and Machine Learning)

**10/2022 – 05/2026**  
CGPA: 8.75

## TECHNICAL SKILLS

- **Languages:** Python, C++, SQL
- **Frameworks & Libraries:** Numpy, Pandas, Matplotlib, Seaborn, Keras, Tensorflow, Data Science
- **Tools & Platform:** MySQL, Power BI, Microsoft Excel, Github

## PROJECT

### Plant Leaf Disease Detection Model with Deep Learning (08/2023 – 12/2023)

- Built an advanced deep learning model using instance segmentation (Mask R-CNN) to automatically detect and localize disease regions on plant leaves from images.
- Collected and manually annotated a comprehensive dataset of healthy and diseased leaf images for robust model training and validation.
- Achieved precise detection and pixel-level segmentation of diseased areas, enabling accurate diagnosis to assist farmers and researchers in managing plant health.
- Developed an end-to-end, user-friendly pipeline from image upload to disease identification, demonstrating the application's value in real agricultural settings

### SpaceX First Stage Landing Prediction (06/2025 – 07/2025)

- Developed end-to-end data science pipeline to predict SpaceX Falcon 9 first stage landing success, leveraging real-world data from APIs and web scraping (Wikipedia, SpaceX API).
- Applied exploratory data analysis (EDA) using Pandas, NumPy, SQL, and extensive visualizations with Matplotlib, Seaborn, Folium, and Dash for interactive insights into launch outcomes.
- Engineered predictive models (Logistic Regression, SVM, KNN, and Decision Tree), with Decision Tree achieving the highest accuracy (best GridSearchCV score: 0.89), to identify key factors impacting landing success.
- Demonstrated proficiency in data collection, wrangling, feature engineering, interactive dashboards, and model evaluation to solve a real business problem in the aerospace domain.

### Historical Automobile Sales Analysis and Dashboard (07/2025)

- Developed an interactive dashboard using Python, Dash, Pandas, and Plotly Express to analyze historical automobile sales data (1980–2023).
- Enabled visualization of sales trends, recession impacts, advertising expenditure, and economic factors using custom line, bar, and pie charts.
- Implemented dynamic filtering and responsive UI for tailored analysis by year, vehicle type, and economic period.
- Leveraged data-driven insights to support business and academic decision-making in the automotive sector.

## CERTIFICATES

### Certifications & Training:

- Online Course, Applied Machine Learning in Python (Coursera)- 12/2023
- Online Course, Professional Data Science Course by IBM – 07/2025
- Online Course, Data Science with Python by Finlatics, 06/2024 to 07/2024

## EXTRA CURRICULAR

### Fusion Club (Event Management Lead, VIT Bhopal)

**11/2022 - 01/2024**

- As the event management lead for Fusion Club, I organized successful events, sharpening my leadership and teamwork skills while deepening my appreciation for the arts' transformative power.

### Linux Club (Core Member, VIT Bhopal)

**01/2024 - Present**

- As a core member of Linux Club, I got an opportunity to explore a really new field and under the guidance of my leads we conducted several successful events, both technical as well as non – technical.