

Palak Satpute

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IIT Bombay, B.Tech Aerospace Engineering (2025)



Skills

- **Languages & Libraries:** Python, C++, SQL, Pandas, NumPy, Matplotlib, scikit-learn
- **Data Tools & Platforms:** Power BI, Tableau, Excel, MySQL, LaTeX, Jupyter Notebook, Google Sheets
- **Other Skills:** EDA, Statistics for ML, Hypothesis Testing, Time Series Analysis, Financial Modeling

Experience

AI Marketing Intern | Kotak Securities

Oct 2025 – Present

- Building **n8n automations** for marketing workflows like email writing & lead enrichment reducing manual workload
- Performing **LLM grounding** with real marketing data & brand guidelines for consistency of AI-generated content.
- Conducting **Generative Engine Optimization** to improve brand visibility in LLMs like Perplexity and ChatGPT.

Data Analyst Intern | Symbion Life Science

Jun 2024 – Aug 2024

- Conducted extensive **sector analysis** on Indian Oncology **Market Value chain** scoping landscape for startup needs
- Curated **20k+** latest data points from **NFHS, PMJAY, NCRP** mapping demographics, geography & cancer types
- Performed **Exploratory Data Analysis** to uncover insights, identify patterns & inform data-driven decision-making
- Delivered comprehensive **data dashboards** using **Power BI & Tableau** for strategic insight into oncology pharma

Projects

Python-Based Fraud Detection System

- Built ML model to identify fraudulent transactions and performed comparative analysis using **confusion matrix**
- Utilized **SMOTE** (Synthetic Minority Over-sampling Technique) to address class imbalance in credit card fraud data
- Deployed **Logistic Regression & XGBoost** model, achieving remarkable recall rate of **88%** & a precision of **79%**

Geospatial Risk Modelling for Drought Assessment

- Conducted district-level **drought risk assessment** in Rajasthan using **Python** and **QGIS** for hazard evaluation
- Processed and analyzed **geospatial datasets** using **pandas, geopandas, and rasterio** to derive key indicators
- Generated & classified **risk maps** with QGIS supporting data-driven **disaster management** & response planning

Data-Driven Forecasting of Tesla Stock Prices

- Implemented **ARIMA** model for stock prediction using Trends, Seasonality, Stationarity & Autocorrelation features
- Plotted **ACF & PACF** graphs to optimise model parameters such as lag observation, differencing & window width
- Predicted the opening price using TESLA stock data with less than **5% Mean Absolute Percent Error (MAPE)**

Netflix Content Analytics and Insights (SQL)

- Analyzed Netflix's content across **10,000+** datapoints, revealing preference insights, trends & content distribution
- Developed **SQL** queries to rank content production by country, identify niche content, & evaluate actor performances

Positions of Responsibility

Summer of Science Mentor

Maths & Physics Club, IIT Bombay | May-Jul'23, May-Jul'24

- Mentored students on Aerodynamics, Mechanics & Control Theory, tracked progress via reports & presentations

Media Coordinator

E-Cell, IIT Bombay | Nov 2022 – Jan 2023

- Led partnerships with **10+** Instagram influencers and negotiated with **20+** media houses for digital marketing

Events and Cultural Coordinator

52nd Mood Indigo, IIT Bombay | Sep 2022 - Dec 2022

- Coordinated workshops with **5+** artists and managed **70+** vendors to enhance the experience of **100K+** visitors

Achievements

- **99.23** Percentile JEE Mains | Medhavi Scholarship- by Madhya Pradesh Chief Minister for exemplary performance
- RC Plane Innovation Award (Top 1% out of 400+) | Boeing Techfest Zonal Finalist
- NCC 'A', 'B', 'C' Certificate holder | Selected pilot for 2 Mah Engr Regt | Attained 3 Annual Training Camps