Project review

"I built a machine learning model to predict whether a passenger will recommend IndiGo Airlines based on 13 years of customer review data. I performed data cleaning, EDA, and trained models like Random Forest and XGBoost. XGBoost gave the best performance. The analysis showed that cabin service and value for money were the strongest drivers of referrals. The insights help IndiGo improve customer experience, refine marketing strategies, and strengthen their competitive position."

Tools: Python, Pandas, NumPy, Scikit-learn, XGBoost, Matplotlib, Seaborn

- Developed a machine learning model to predict whether passengers would recommend IndiGo Airlines based on 13 years of customer review data.
- Performed data cleaning, preprocessing, feature engineering, and exploratory data analysis on attributes like cabin service, food & beverage ratings, ground service, and value for money.
- Evaluated multiple classification models (Logistic Regression, Random Forest, XGBoost); XGBoost achieved the highest accuracy and recall.
- Identified key drivers of customer referrals, such as cabin service quality, overall rating, and value for money.
- Generated actionable insights that can help airlines improve customer experience, optimize service areas, and enhance brand loyalty.
- Delivered full documentation, dashboards/visualizations, and a predictive model that supports data-driven decision-making.

Business Impact

- Improve Customer Experience
- Target Service Improvements
- Strengthen Marketing Strategies
- Strengthen Marketing Strategies

Model Building

I tried multiple classification algorithms:

- Logistic Regression
- Random Forest
- XGBoost
- Decision Tree

The project provides IndiGo with actionable intelligence to boost customer loyalty and referrals.