

1- Project Overview

2- Data Collection

3- Data Exploration :

(dataset's structure and identify potential relationships between features.....Check for missing values, duplicates, and outliers. Summarize data distributions and basic statistics.)

4- Preprocessing and Feature Engineering :

- Handle missing data
- Handle outliers
- encoding categorical data, and creating interaction features relevant to churn prediction.

5- Exploratory Data Analysis (EDA):

- 1- (Create visualizations (heatmaps, pair plots, histograms) to detect patterns, correlations, and outliers.)
- 2- Advanced Data Analysis (statistical tests (e.g., t-tests, ANOVA, chi-squared tests))
- 3- Feature Engineering:
- 4- Data Visualization: power bi and python.

6- Machine Learning Model :

- 1- Model Selection
- 2- Model Training
- 3- Model Evaluation
- 4- Hyperparameter Tuning
- 5- Model Comparison

7- MLOps, Deployment, and Monitoring:

- 1- MLOps Implementation:
- 2- Model Deployment:
- 3- Model Monitoring:
- 4- Model Retraining Strategy: