

Assignment - Predicting Customer Churn in a Telecommunications Company

Objective:

The primary objective of this project is to develop a predictive model that can identify customers at risk of churning, enabling the company to take proactive measures to retain them.

Tasks:

Data Collection and Preprocessing:

You can use this dataset for the assignment: <https://www.kaggle.com/datasets/blastchar/telco-customer-churn>

Preprocess the data to handle missing values, encode categorical variables, and prepare it for analysis.

Exploratory Data Analysis (EDA):

Perform EDA on the dataset to understand customer behaviour and factors influencing churn. Visualize key findings using appropriate graphs and charts.

Feature Engineering:

Create relevant features that can help in predicting churn.

Building the Churn Prediction Model:

Choose and implement a machine learning algorithms for churn prediction. You can consider algorithms like logistic regression, random forests, gradient boosting, or any other suitable models. Train and fine-tune the models using the dataset.

Model Evaluation:

Evaluate the performance of your churn prediction modes using appropriate metrics like accuracy, precision, recall, and F1-score.

Documentation and Reporting:

Write a detailed yet concise report that includes explanations of the model used, EDA findings, feature engineering, evaluation results, and any challenges faced during the project. Share your code and report on GitHub.

Deliverables:

- Jupyter Notebook or Python code implementing the churn prediction model in a GitHub repository containing all the project files.
- A concise report documenting your approach, findings, and results. This report can be a markdown file pushed on github itself.

Evaluation Criteria:

Your project will be evaluated based on the following criteria:

- The quality and performance of the churn prediction model.
- Data preprocessing and EDA skills.
- Code quality, organization, and documentation.
- Visualization of insights.
- The clarity and depth of your report.

Note:

Feel free to reach out to deepank@ivypods.com if you have any questions or need clarification on any aspect of the project. Good luck!