

### 3. Dataset Information

Dataset:  Customer\_data

The dataset information can be found in this doc [Data Information](#).

### 4. Deliverables

- A data exploration and preprocessing notebook or report that analyzes the dataset, handles missing values, and prepares the data for modeling. **(10 Marks)**
- A machine learning model capable of predicting customer churn. **(20 Marks)**
- An evaluation of model performance using appropriate metrics (such as accuracy, precision, recall, F1 score, etc.). **(10 Marks)**
- Final video clip of candidate summarizing the entire process of the project as the presentation. **(Note: Video should not exceed 5 mins) (10 Marks)**

### 5. Success Criteria

The success of the project will be determined by the following:

- Proper interpretation of the model's output, providing actionable insights to reduce customer churn.
- Get the predictions for the new data.

### 6. Guidelines

- Make sure to split your data into training and testing sets to avoid overfitting.
- Tune the hyperparameters of your models to improve performance.
- Report all the steps taken in the data preprocessing, modeling, and evaluation phases.
- Provide a final model that balances accuracy with interpretability.

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### 7. Tools Required

- Python (with libraries such as pandas, scikit-learn, matplotlib, seaborn, etc.)
- Jupyter Notebook or any IDE suitable for running Python code.

### Submit Guidelines

- Submit your ipynb/ folder.
- Create 2 videos of maximum of 5 mins explaining the analysis for each Part and share the drivelink along with the folder.

### How to ZIP a PDF file:

- Put all of the documents/ipynb you want to compress (or just one) into a new folder.