FEATURE ENGINEERING End-to End PROJECT (30M)

AIML Certification Program

Welcome to your project assignment! This project is designed to provide you with hands-on experience in data analysis and machine learning. By working through this assignment, you will gain practical skills in data preprocessing, feature engineering, and regression analysis. These are critical steps in any data science project, and mastering them will greatly enhance your ability to tackle real-world data challenges.

Instructions

Please follow the steps below to complete your project assignment:

- **Choose a Dataset**: Select a dataset that interests you. Make sure the dataset is not overly clean or preprocessed, as you will need to perform various preprocessing steps.
- **Data Preprocessing**: Apply necessary preprocessing steps to your chosen dataset. This may include handling missing values, removing duplicates, and normalizing or standardizing data.
- **Data Wrangling and Feature Engineering**: Engage in data wrangling to organize and clean your data. Create new features that can improve the performance of your machine learning models.
- **Regression Analysis**: Implement regression techniques to analyze the data. Choose appropriate models and evaluate their performance.
- **Explore Beyond**: While the tasks mentioned in the notebook are required, we encourage you to go beyond these basics. Experiment with additional techniques and tools to deepen your understanding and improve your learning experience.

Provide detailed explanations for all the steps as markdown cell in the notebook. Simple code without proper explanation invites zero credit.

To be submitted.

- Python notebook(ipynb) with all the cells properly executed saved as <Student id>_FE_Project.ipynb)
- The pdf version of the python notebook with all the results.