Machine Learning Capstone Project

In this project, you will follow a general structure to complete various machine learning projects. For each project, you will be required to:

1. **Analyze and Visualize the Data**: Perform exploratory data analysis (EDA) to understand the dataset and visualize trends.

2. **Data Cleaning**: Handle missing values, preprocess data (e.g., encoding categorical variables, scaling features), and remove or treat outliers.

3. **Model Building**: Train and evaluate at least **TWO** machine learning models to predict the target variable.

4. **Evaluation**: Use appropriate evaluation metrics to compare the performance of your models (e.g., accuracy, RMSE, precision, recall, ROC-AUC, etc.).

Feel free to explore advanced techniques such as feature engineering, cross-validation, hyperparameter tuning, or model optimization to improve your results. The projects listed below can follow this structure.

Project List

Project 1: Telecom Customer Churn Prediction

- ***Dataset***: Telecom Customer Churn Dataset
- ***Objective***: Predict whether a telecom customer will churn based on demographic and service-related features.

Project 2: Taxi Fare Prediction

- ***Dataset***: Taxi Fare Prediction Dataset
- ***Objective***: Predict taxi fares based on trip information such as pickup/dropoff locations, trip distance, and time of day.

Project 3: House Price Prediction

- ***Dataset***: House Prices Dataset
- ***Objective***: Predict house prices based on various features like location, size, and house characteristics.

Project 4: Predict Heart Disease

- ***Dataset***: Heart Disease UCI Dataset
- ***Objective***: Predict the likelihood of heart disease based on patient health metrics.

Project 5: Vaccine Usage Prediction

- ***Dataset***: H1N1 Flu Vaccine
- ***Objective***: Predict the usage or demand for vaccines based on factors such as population demographics, region, vaccine type, and distribution metrics.

Project 6: Mobile Price Prediction

- ***Dataset***: Mobile Price Range
- ***Objective***: Predict the price range of mobile phones based on technical specifications such as battery life, RAM, processor speed, screen size, etc.