**Predictive Modeling for Real Estate: Web App with ML & CI/CD Pipeline**

**Project Description:**

This project focuses on predicting house prices using historical data from Kaggle. It involves comprehensive data preprocessing, including data cleaning, feature engineering and key feature extraction. After preparing the data a machine learning model is trained to accurately predict house prices. The trained model is then integrated into a Flask-based web application allowing users to input data and receive real-time price predictions. Finally, the project includes the implementation of CI/CD pipelines using AWS and GitHub to automate deployment and streamline updates to the web app.

**Key Features:**

 **Data Collection & Preprocessing:** Collecting data from Kaggle and cleaning, preprocessing it for model training.

 **Feature Engineering:** Extracting relevant features that contribute in the model accuracy.

 **Machine Learning Models:** Train the ML model to predict house price based on historical data.

 **Web App:** Build website that will be used by end user to predict house price.

 **CI/CD:** Deploy CI/CD pipeline with the use of GitHub & AWS to automate the Integration & Deployment process.

**Tools & Technologies:**

* **Programming Languages & Libraries:** Python, Pandas, Matplotlib, Scikit-learn.
* **CI/CD:** AWS & GitHub

#### ****Expected Outcomes:****

* Accurate house price prediction
* Website for the end user to use
* Automated Deployment Pipeline
* Scalable and Maintainable Architecture