Project Initialization and Planning Phase

Date	28 June 2024
Team ID	team-739715
Project Title	House Rent Price Prediction Using Machine Learning
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

House Rent Price Prediction project proposal outlines a solution to address a specific problem. With a clear objective, defined scope, and a concise problem statement, the proposed solution details the approach, key features, and resource requirements, including hardware, software, and personnel.

Project Overview	
Objective	To develop a predictive model that can estimate monthly rent prices based on various factors such as location, property type, and amenities.
Scope	This project will focus on collecting data from major cities, preprocessing the data, developing a machine learning model, and deploying the model in a user-friendly web interface. The predictions will be based on factors such as city, monthly rent, BHKs, baths, square footage, build-up area, type of property, location, and deposit description.
Problem Statement	
Description	Accurate prediction of rental prices is challenging due to diverse factors influencing the market. Traditional methods often fall short in accounting for these complexities, leading to inaccurate and inefficient pricing strategies.
Impact	Improving the accuracy of rental price predictions can benefit renters, landlords, and real estate professionals by providing more reliable information for decision-making.
Proposed Solution	

Approach	1. Data Collection: Gather data on rental properties from various sources.2. Data Preprocessing: Clean and preprocess the data.3. Exploratory Data Analysis (EDA): Analyze the dataset to identify key factors .4. Model Development: Develop machine learning models using algorithms such as Linear Regression, Random Forest, and Gradient Boosting.5. Model Evaluation: Evaluate the models using performance metrics.6. Deployment: Deploy the final model and create a web-based interface.
Key Features	- Utilizes multiple machine learning algorithms for optimal accuracy.- Includes a web-based interface for user-friendly access. - Provides insights into key factors influencing rental prices.

Resource Requirements

Resource Type	**Description**	**Specification/Allocation**
Hardware		
Memory	RAM specifications	e.g., 8 GB
Storage	Disk space for data, models, and logs	e.g., 1 TB SSD
Software		
Frameworks	Python frameworks &Web frameworks	e.g., Flask
Libraries	Additional libraries	e.g., NumPy, pandas, flask, scikit-learn(version - 1.2.2),etc.…
Development Environment	IDE, version control	e.g., Google Colab , Visual studio code , python version 3.12.4
Data		
Data	Training dataset, source code, Some data regarding House Rent Price Prediction.	Dataset from Kaggle, source code from dashboard, images from google.