🏠 House Rent Prediction – Project Documentation

📌 Project Overview

This project uses machine learning to predict house rental prices based on features like location, size, number of rooms, and furnishing status. It leverages Python libraries for data preprocessing, visualization, and model training.

🛠 Tech Stack

- **Language**: Python
- **Libraries**: Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn
- **Model**: Linear Regression (can be extended to other regressors)

📁 Directory Structure

Folder/File	Description
`house_rental/`	Main working directory
`house_rent.csv`	Dataset used for training and testing
`House_Rent_Prediction.ipynb`	Jupyter notebook with EDA and model training

📊 Dataset Description

The dataset contains rental listings with the following features:

Column Name	Description
`BHK`	Number of bedrooms
`Size`	Area in square feet
`Floor`	Floor info (e.g., "Ground out of 2")
`Area Type`	Super/Carpet/Built area
`City`	City name
`Furnishing Status`	Furnished / Semi-Furnished / Unfurnished
`Tenant Preferred`	Family / Bachelors / Company
`Bathroom`	Number of bathrooms
`Rent`	Target variable (monthly rent in INR)

🔍 Exploratory Data Analysis (EDA)

- Checked for missing values and data types
- Visualized distributions and correlations
- Encoded categorical variables using Label Encoding
- Normalized numerical features

Model Training

Model Used

```python from sklearn.linear_model import LinearRegression model = LinearRegression() model.fit(X_train, y_train)
```