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In [66]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
import warnings
warnings.filterwarnings ("ignore", category=FutureWarning)
from sklearn.linear_model import LinearRegression
from sklearn.model_selection import train_test_split
from sklearn.metrics import mean_absolute_error, mean_squared_error, r2_score
df=pd.read_csv(r"C:\Users\Vicky\Downloads\Housing (1).csv")
print("First 5 rows of the dataset:")
print(df.head())
df.replace({'yes': 1, 'no': 0 }, inplace=True)
df = pd.get_dummies (df, drop_first=True)
X=df.drop('price', axis=1)
y=df['price']
X_train, X_test, y_train, y_test=train_test_split(X, y, test_size=0.2, random_state=42)
model = LinearRegression()
model.fit(X_train, y_train)
y_pred=model.predict(X_test)
print("\nModel Evaluation:")
print("lean Absolute Error (MAE): (mean_absolute_error(y_test, y_pred): .2f)")
print("lean Squared Error (HSE): (mean_squared_error(y_test, y_pred):.2f}")
print(f" Score: (r2 score(y_test, y_pred): .4f)\n")

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print("lean Squared Error (HSE): (mean_squared_error(y_test, y_pred):.2f}")
print(f" Score: (r2_score(y_test, y_pred):.4f)")
plt.figure(figsize=(8,6))
plt.scatter(y_test, y_pred, color ='blue', alpha=0.6)
plt.plot([y.min(), y.max()], [y.min(), y.max()], 'r--')
plt.xlabel("Actual Price")
plt.ylabel('Predicted Price')
plt.title('Actual vs Predicted House Prices')
plt.grid(True)
plt.tight_layout()
plt.show()

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First 5 rows of the dataset:

	price	area	bedrooms	bathrooms	stories	mainroad	guestroom	basement	\
0	13300000	7420	4	2	3	yes	no	no	
1	12250000	8960	4	4	4	yes	no	no	
2	12250000	9960	3	2	2	yes	no	yes	

First 5 rows of the dataset:

	price	area	bedrooms	bathrooms	stories	mainroad	guestroom	basement	\
0	13300000	7420	4	2	3	yes	no	no	
1	12250000	8960	4	4	4	yes	no	no	
2	12250000	9960	3	2	2	yes	no	yes	
3	12215000	7500	4	2	2	yes	no	yes	
4	11410000	7420	4	1	2	yes	yes	yes	

	hotwaterheating	airconditioning	parking	prefarea	furnishingstatus
0	no	yes	2	yes	furnished
1	no	yes	3	no	furnished
2	no	no	2	yes	semi-furnished
3	no	yes	3	yes	furnished
4	no	yes	2	no	furnished

Model Evaluation:

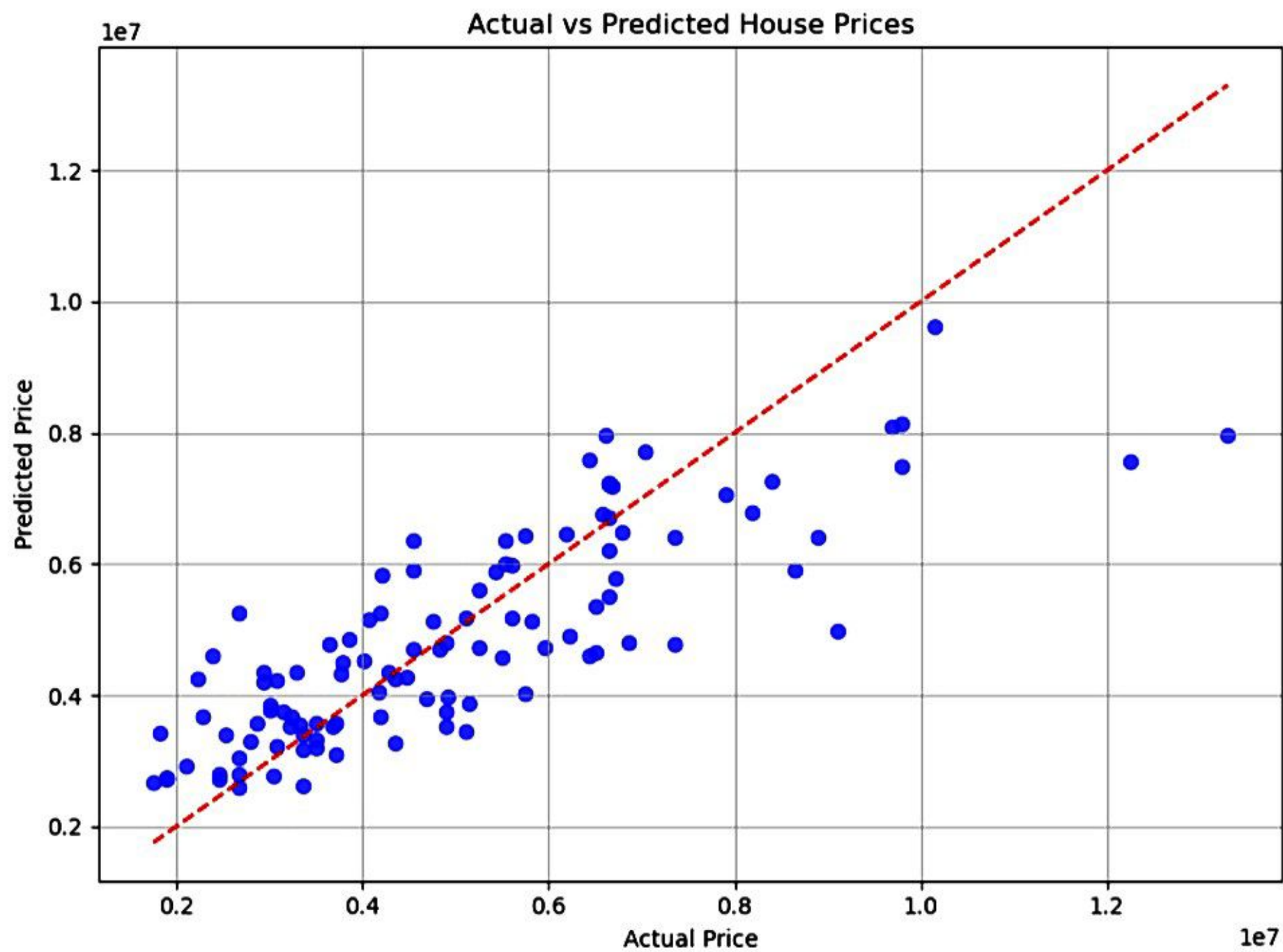
lean Absolute Error (MAE): (mean_absolute_error(y_test, y_pred): .2f)

lean Squared Error (HSE): (mean_squared_error(y_test, y_pred):.2f}

Score: (r2_score(y_test, y_pred):.4f)

1e7

Actual vs Predicted House Prices



In []: