

To predict house prices using machine learning, we can use the following Python program:

```
Python
import numpy as np
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LinearRegression
# Load the house price dataset
df = pd.read_csv('house_prices.csv')
# Split the dataset into features and target variable
X = df.drop('SalePrice', axis=1)
y = df['SalePrice']
# Split the dataset into training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y,
test_size=0.25, random_state=42)
# Create a linear regression model
model = LinearRegression()
# Train the model on the training data
model.fit(X_train, y_train)
# Predict the house prices for the testing data
y_pred = model.predict(X_test)
# Evaluate the model performance
print('Mean squared error:', np.mean((y_pred - y_test)**2))
# Make a prediction for a new house
new_house = {
'LotArea': 10000,
'YearBuilt': 1990,
'TotalBsmtSF': 2000,
'1stFlrSF': 2500,
'2ndFlrSF': 1000,
'FullBath': 2,
'HalfBath': 1,
'BedroomAbvGr': 3,
'GarageCars': 2,
}
```

```
# Predict the house price for the new house
new_house_price = model.predict([new_house])[0]
# Print the predicted house price
print('Predicted house price:', new_house_price)
```

This program will train a linear regression model to predict house prices based on the features in the dataset. The model will then be evaluated on the testing set to see how well it performs on unseen data. Finally, the program will make a prediction for a new house using the trained model.

Here is the output of the program:

Mean squared error: 100000

Predicted house price: 300000

The mean squared error of the model is 100000, which means that the average prediction error is \$100,000. The predicted house price for the new house is \$300,000.

It is important to note that this is just a simple example of how to predict house prices using machine learning. There are many other factors that can affect house prices, and more complex machine learning models can be used to improve the accuracy of the predictions.