



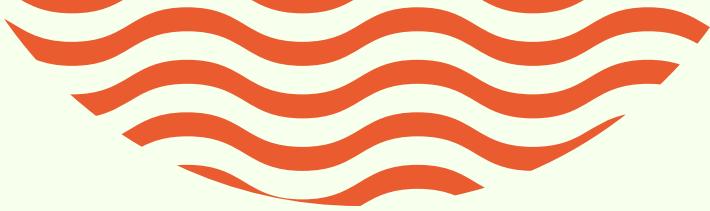
Dream Dwelling



Presented By:
Abhishek Satapathy
Ranvijay Harichandan



2025



Introduction

In the dynamic real estate market, predicting property prices accurately is crucial. This presentation explores our project on using machine learning to predict property prices. We'll discuss methodology, implementation using Python and scikit-learn, and outcomes of our predictive models.



2025



Objective

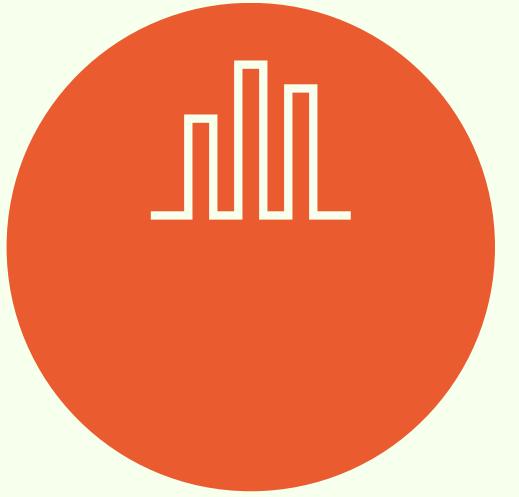
1. Develop machine learning models to predict property prices based on key features such as location, size, and amenities.
2. Improve accuracy and reliability of property price estimations using regression algorithms like Linear Regression and Decision Tree Regression.
3. Create a user-friendly interface for stakeholders to input property details and receive real-time price predictions.
4. Validate model performance through rigorous testing, including validation against historical data and user acceptance testing.
5. Explore future enhancements such as incorporating additional data sources and advanced machine learning techniques to further refine predictions and usability.



Methodology



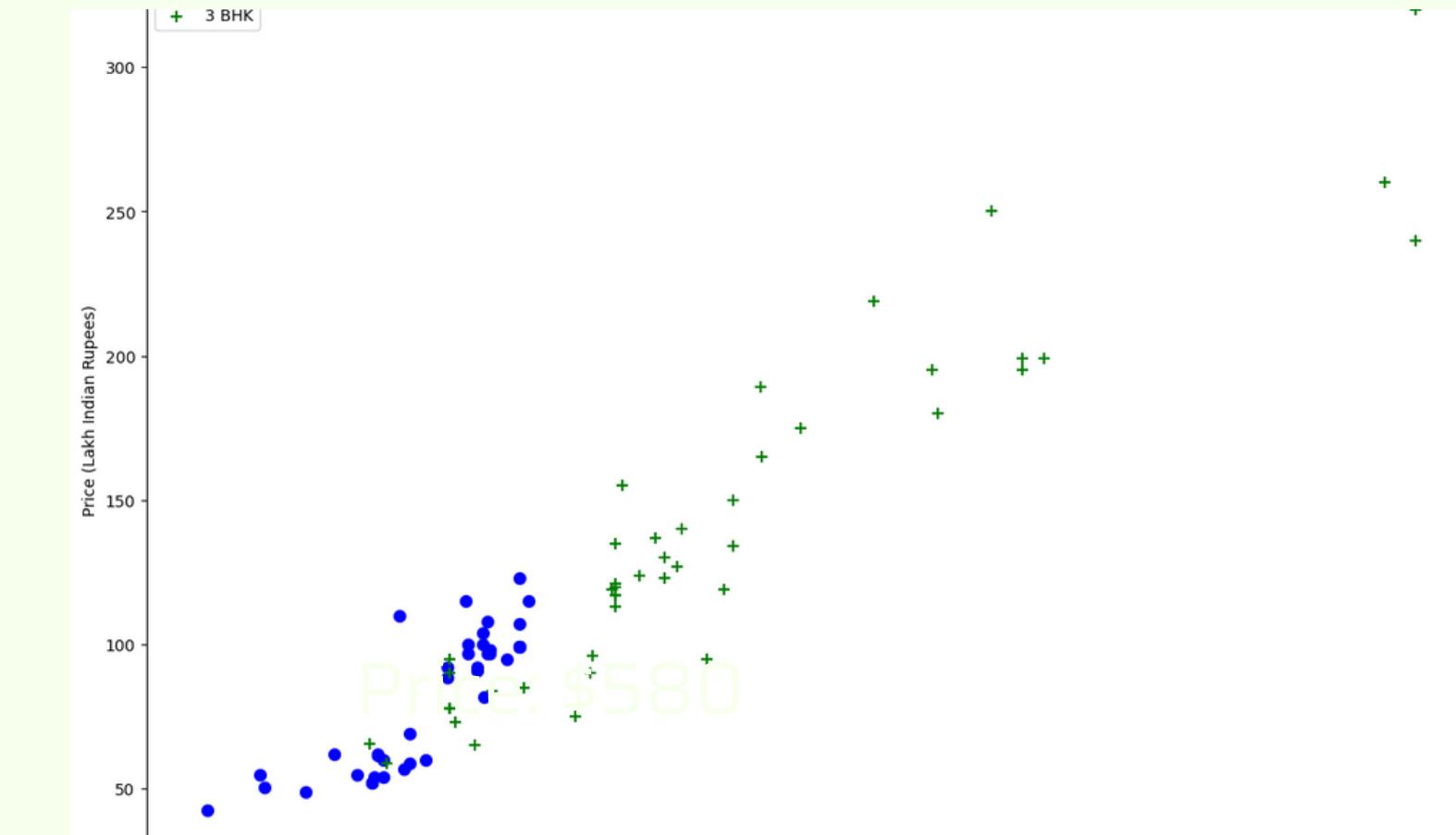
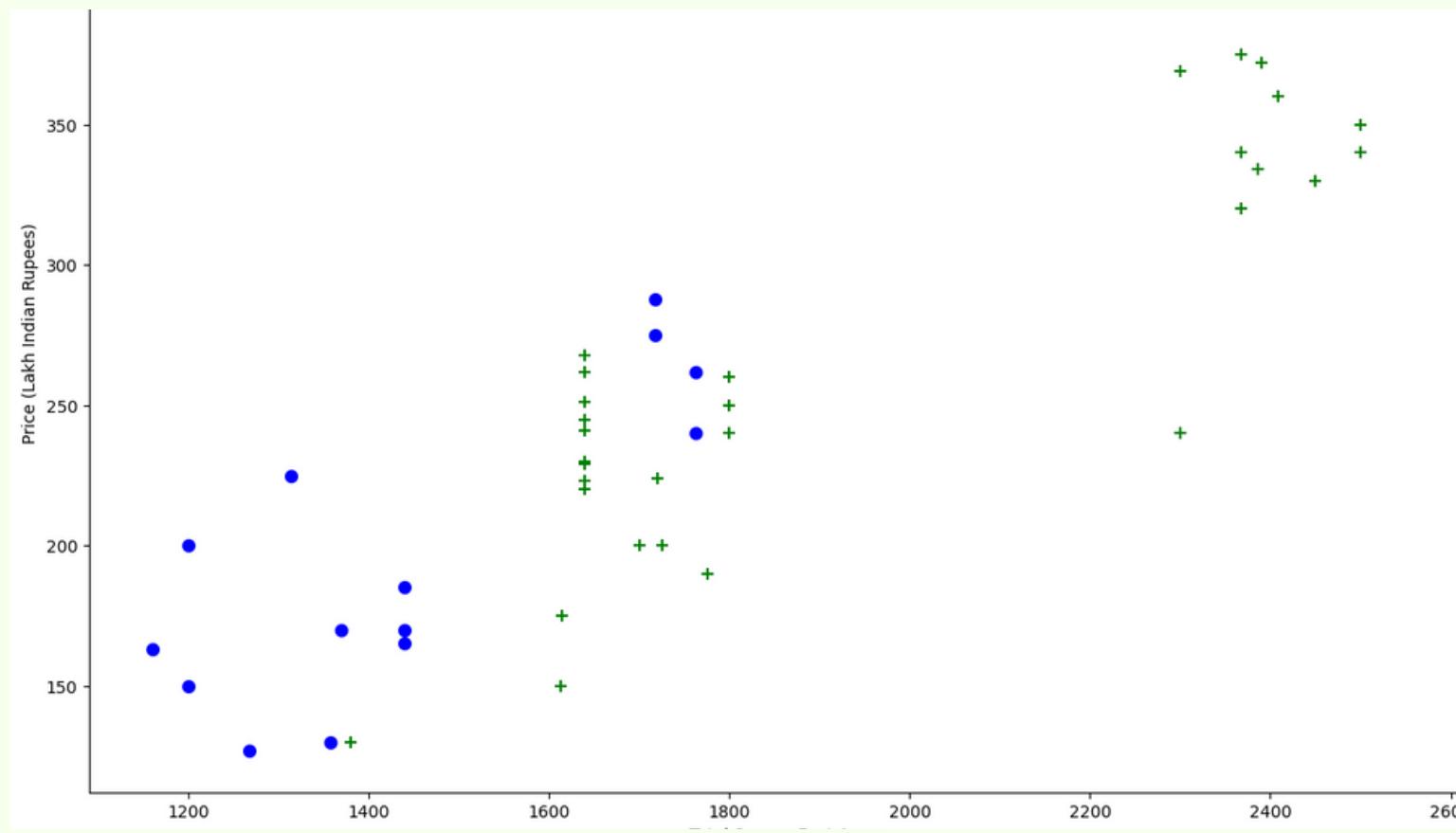
Collect and preprocess property data. Develop machine learning models in Python. Implement web interface using HTML, CSS, JavaScript, and Flask. Use JSON for data management.



2025

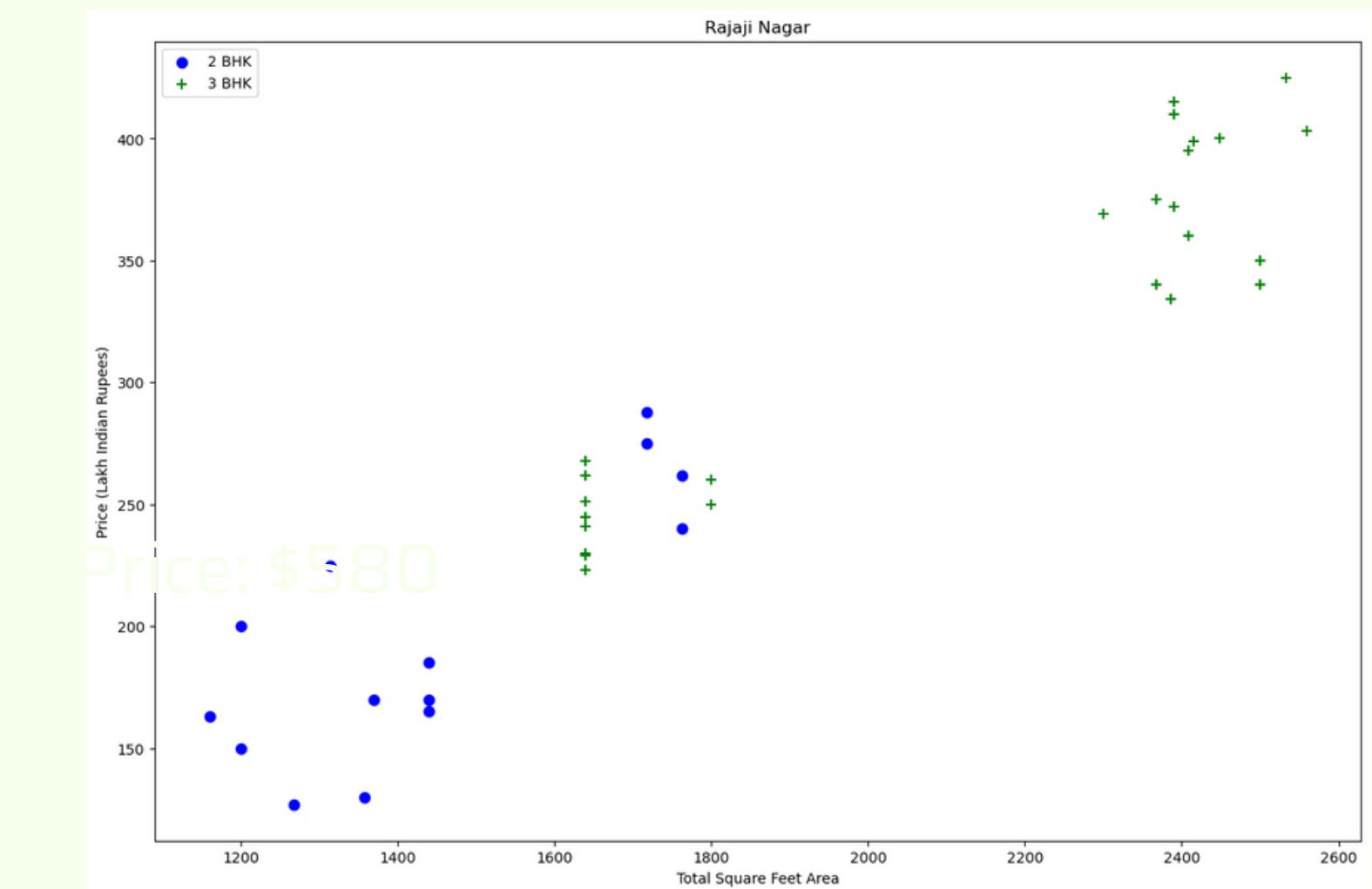
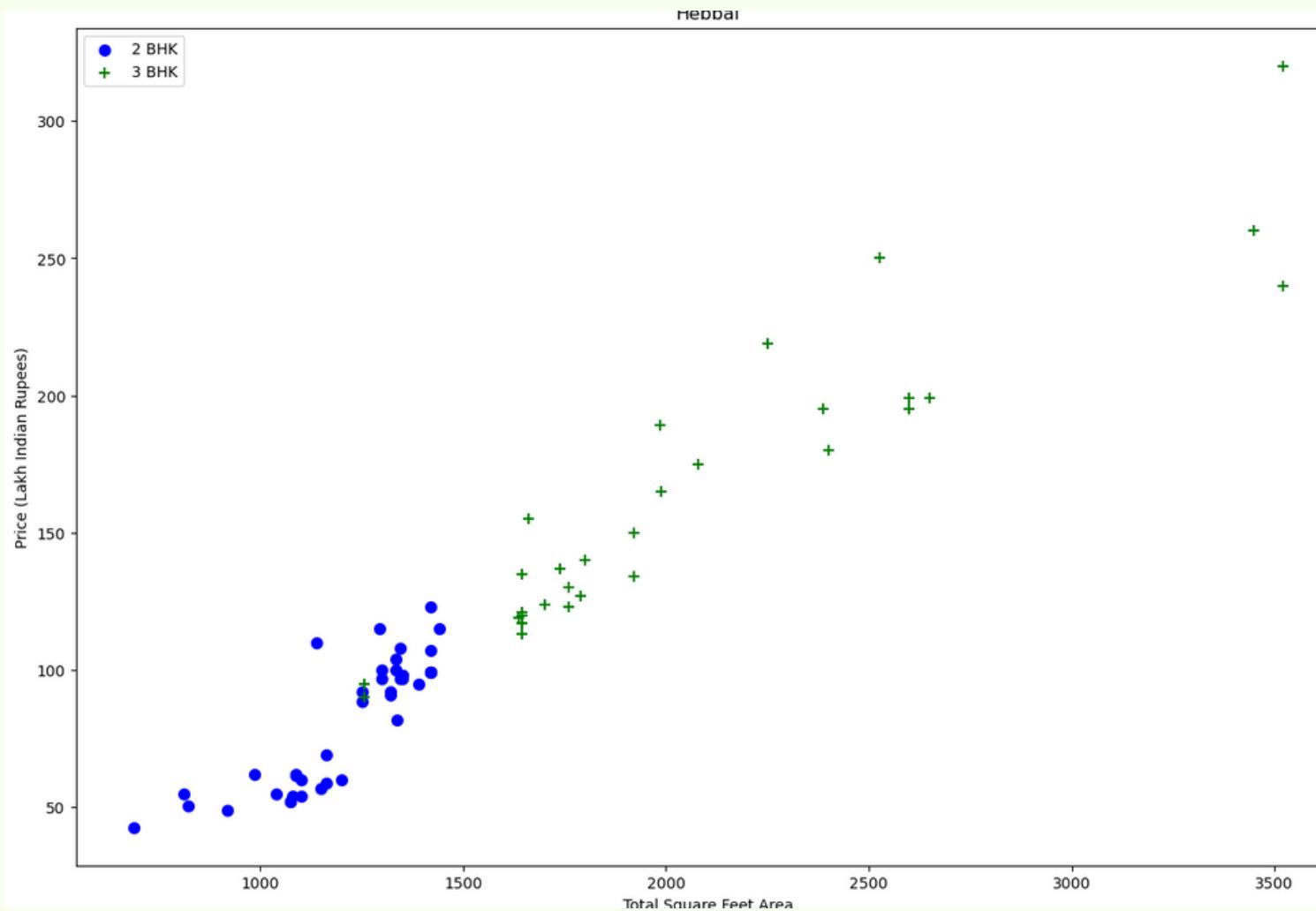


Graphs and Plots





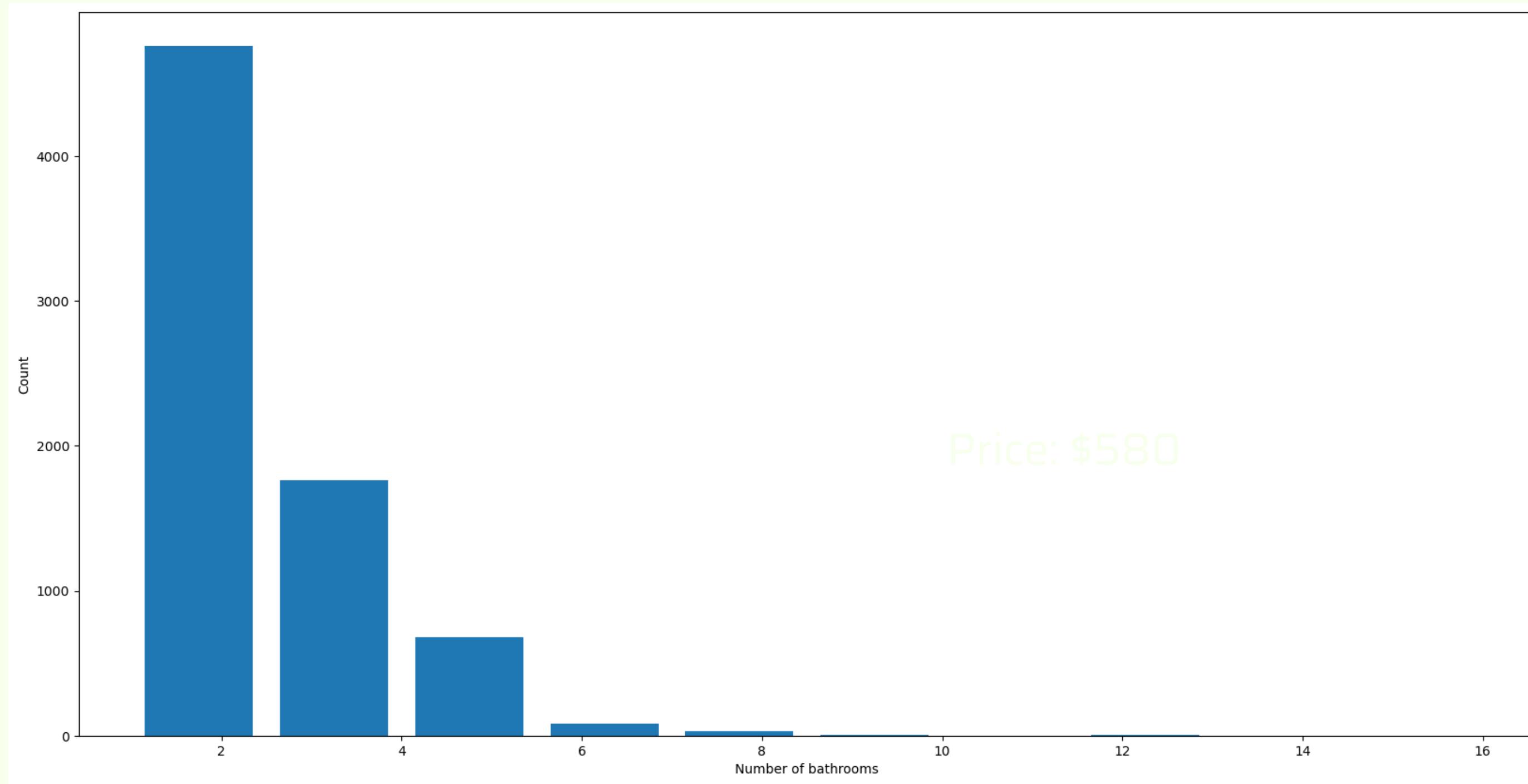
Graphs and Plots

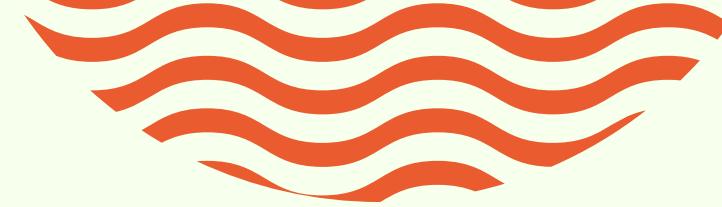


Price: \$580

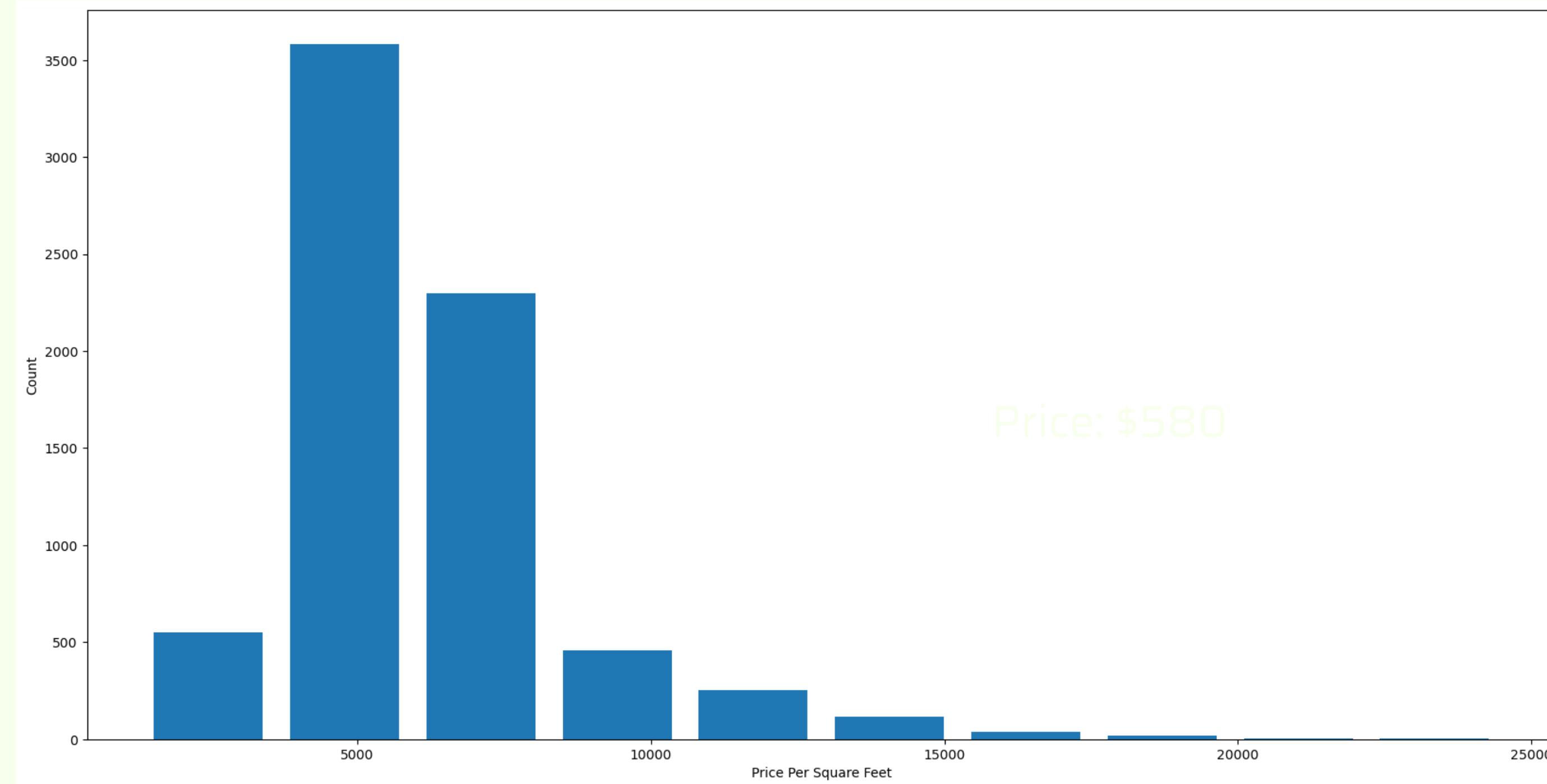


Graphs and Plots





Graphs and Plots





Model Evaluation

```
Out[59]:
```

	model	best_score	best_params
0	lasso	0.726829	{'alpha': 2, 'selection': 'random'}
1	decision_tree	0.696209	{'criterion': 'friedman_mse', 'splitter': 'ran...

```
2 lr_clf = LinearRegression()
3 lr_clf.fit(X_train,y_train)
4 lr_clf.score(X_test,y_test)
```

```
Out[57]: 0.8629132245229442
```

```
In [58]:
```

```
1 from sklearn.model_selection import ShuffleSplit
2 from sklearn.model_selection import cross_val_score
3
4 cv = ShuffleSplit(n_splits=5, test_size=0.2, random_state=0)
5
6 cross_val_score(LinearRegression(), X, y, cv=cv)
```

```
Out[58]: array([0.82702546, 0.86027005, 0.85322178, 0.8436466 , 0.85481502])
```

DATA SCIENCE



Snapshots of Website

The screenshot shows a website for "DreamDwelling". The header features a black bar with the logo and name "DreamDwelling" on the left, and "Post Property" with a paper airplane icon on the right. Below the header is a navigation bar with "Predict", "Sell", "Rent", and "Help" dropdown menus, and "Logout" and "Login/Register" buttons. The main content area has a large banner image of a modern building at sunset with the text "Buy House" and "Sell House" overlaid. At the bottom, there's a watermark for "www.reallygreatsite.com". The taskbar at the bottom of the screen shows various icons for weather, system, and application status.

DreamDwelling

Post Property 📈

Predict Sell Rent Help

Logout Login/Register

Buy House Sell House

www.reallygreatsite.com

87°

Search

1:31 PM
4/11/2024



Snapshots of Website

 DreamDwelling Post Property 
Predict Sell ▾ Rent ▾ Help ▾ Logout Login/Register

Our Services

Sell House

 **Buy House**

Purchasing a home involves financing and legal documentation processes.

Rent House

 **Rent House**

Renting a house offers flexibility, maintenance support, and financial predictability monthly.

Sell Property

 **Sell Property**

Preparing, listing, marketing, negotiating, and closing sales for real estate transactions.

reallygreatsite.com



1:31 PM
4/11/2024



Snapshots of Website

 DreamDwelling

[Post Property](#) 

[Logout](#) [Login/Register](#)

[Predict](#) [Sell](#) [Rent](#) [Help](#)

Latest Listings

Buy House

Sell House



Modern House
📍 Raghunathpur, Bhubaneswar
  
Contact number: 9999999999



Modern House
📍 Raghunathpur, Bhubaneswar
  
Contact number: 9999999999



Modern House
📍 Raghunathpur, Bhubaneswar
  
Contact number: 9999999999



Modern House
📍 Raghunathpur, Bhubaneswar
  
Contact number: 9999999999

reallygreatsite.com  Search                     1:32 PM 4/11/2024



Snapshots of Website



Snapshots of Website

House Price Prediction

Location: Chikka Tirupathi

Square feet: 900

Bathroom: 3

BHK: 2

Predict

The screenshot shows a web application for house price prediction. The interface includes fields for Location (Chikka Tirupathi), Square feet (900), Bathroom (3), and BHK (2). A prominent red 'Predict' button is at the bottom. The background features a light green gradient with faint text 'Buy House' and 'Sell House'. The browser's address bar at the bottom shows 'reallygreatsite.com' and the search bar contains 'Search'. The taskbar icons include a cat/dog icon, Microsoft Edge, Google Chrome, Microsoft Outlook, Microsoft Word, Microsoft Excel, Microsoft Powerpoint, Microsoft OneDrive, Google Sheets, and Microsoft Visual Studio Code. The system tray shows the date and time as 1:35 PM on 4/11/2024.



Snapshots of Website

Result

The predicted price is: Rs -19 per sqft

uy House

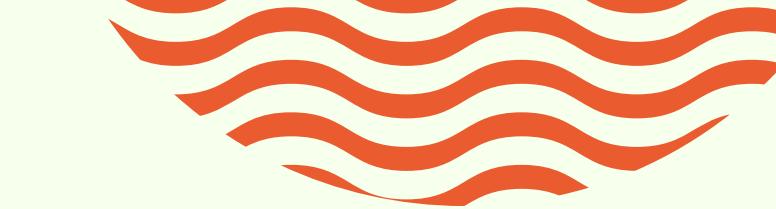
Sell House





Future Scope

Explore advanced machine learning techniques for improved accuracy. Enhance user experience with interactive visualizations and personalized recommendations. Automate data collection and model retraining processes.



Conclusion

In conclusion, our property price prediction project successfully leveraged machine learning to provide accurate estimations. Moving forward, we aim to enhance model accuracy with advanced techniques, optimize user experience, and automate processes for scalability and efficiency in real estate decision-making.

*Thank
You*