Question Answer on House Price Prediction

1. **How important and useful is this project based on the market situation?**

Our market has changed a lot over time, mostly after the covid situation. The house price increased a lot and there is huge demand in the market for buying house. I have created a project using Kaggle data, that can predict the price of a house, based on multiple features. In the current market situation, it's quite demanding.

2. **What exactly are you doing in this project?**

In this project, I am trying to find, based on the given data, what are the factors that can impact house pricing, also I have fitted a model that can predict the house prices.

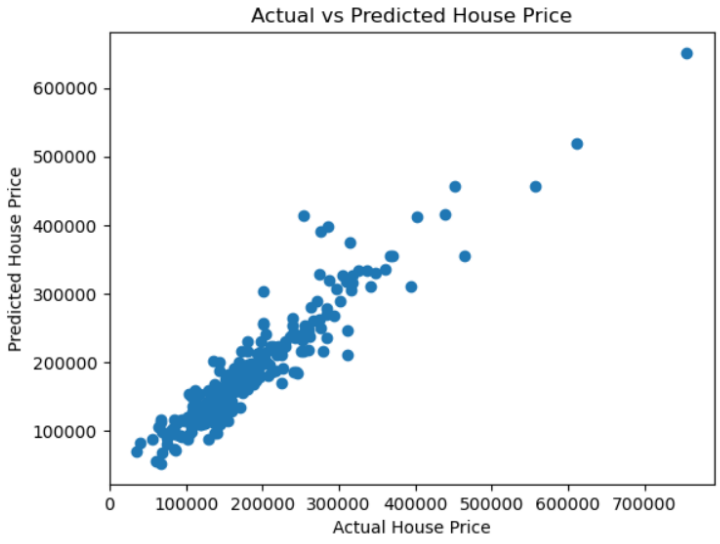
3. **Is it possible to make a product or application using your project? If so, how?**

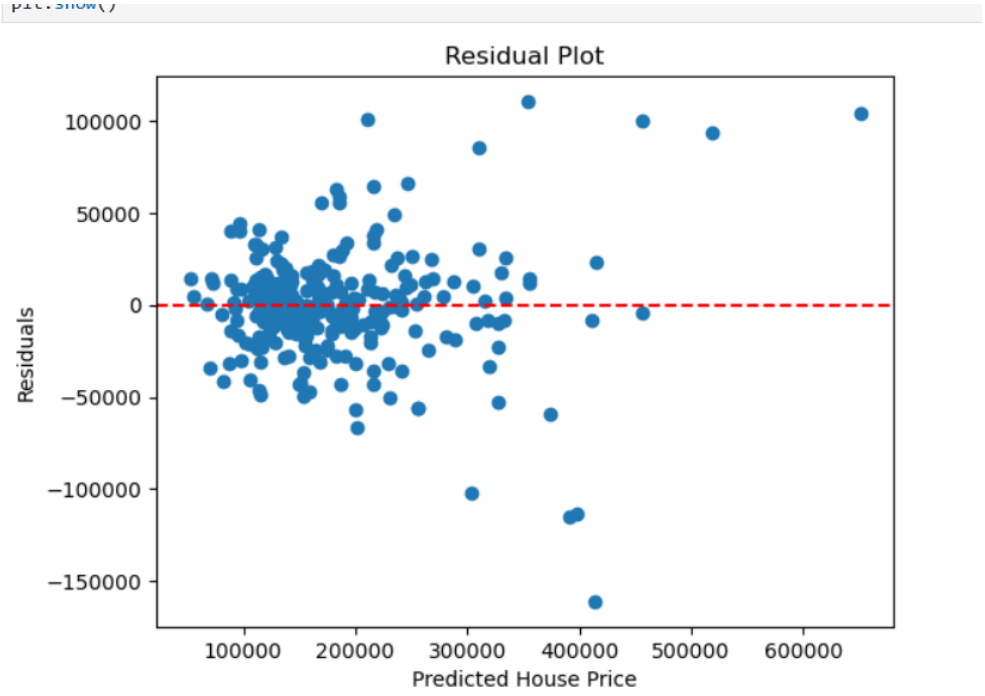
Yes, we can put the prediction model in an API, that can take the list of attributes as input and output the price of the house. We can also host the API in a webserver, that can accept requests from different clients.

4. **How accurate is your prediction?**

I have used residual plot along with the actual vs predicted plot. The diagram seems quite promising with respect to accuracy.

```
plt.xlabel('Actual House Price')
plt.ylabel('Predicted House Price')
plt.title('Actual vs Predicted House Price')
plt.show()
```





5. **Could your prediction be even more accurate?**

Yes, there is always an opportunity to learn more and update the model accordingly to improve the accuracy. I have not tested other combinations of features to produce a more accurate model, but there is always a scope to improve.

6. **What are the other models you can fit for this prediction?**

There are several models that can be used to predict the numeric variables, some of which are linear regression, decision tree, neural network, K-nearest neighbors.

7. **How have you chosen the features for the prediction?**

I initially divided the group of attributes into numeric and categorical, for the numerical group I did the correlation analysis for feature selection, for categorical group I did some analysis by plotting them and checking the impact of it on house pricing. Then I have chosen the features accordingly.

8. **How have you documented the project?**

I have created the github repository for the code, I have documented the project with project white paper, and planning to put the white paper as well on the git repository for documentation.

9. **Does this project help you in your career path?**

Yes, I have learned several things while looking for the data and going through different blogs to understand how predictions are done with different models, I have also learned about how to determine the accuracy of models. While doing analysis on different attributes, I have leaned separate ways to plot. All these learning add up values to my career path.

10. Are there any ethical considerations? Please explain.

There may be several ethical implications for house price perdition, as house price is an economic information, we must be very sure before publishing this in the outside world, there are several decisions, that can be made based on the estimated price. As the consumer knows the house that they want the prediction, consumers will have the address and other information about the location, now if the prediction came wrong, it would create a wrong impression about the locality and about the house. The owner of the house can be impacted by that.