

Fourth Progress Report

of

Project - I

Subject Code: 4IT31

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Group Number : G - 13

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Topic : House Price Prediction

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In

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1 – Previous Work Done :

- Sign-Up / Login
- Data Cleaning & Pre-Processing
- UI Design

- Prediction Page
- Data Cleaning & Pre-Processing
- Handling Categorical Column
- Selecting Model
- UI Design

2 – Further Work Done on Modules :

❖ Training Model:

```
X_train, X_test, Y_train, Y_test = train_test_split(X, Y, test_size=0.2,
random_state=292)
```

```
final_LR_model = LinearRegression()
```

```
pipe = make_pipeline(column_trans, final_LR_model)
```

```
pipe.fit(X_train, Y_train)
```

```
Y_pred = pipe.predict(X_test)
```

```
df_output = pd.DataFrame({
    "actual" : Y_test.tolist(),
    "pred" : Y_pred.tolist()
})
```

```
df_output
```

	actual	pred
0	83.00	71.203751
1	67.77	55.008371
2	165.00	154.841416
3	72.00	78.151181
4	77.00	68.790436
...
2013	40.50	56.515097
2014	45.84	63.354683
2015	74.52	63.943111
2016	84.00	93.102263
2017	67.00	66.223681

2018 rows × 2 columns

❖ Dumping Model:

```
import pickle
```

```
pickle.dump(pipe, open('BangaloreHousePricePredictionModel.pkl', 'wb'))
```

```
pipe.predict(pd.DataFrame(['1st Phase JP Nagar', '2', '1000', '2'],  
columns=['location', 'size_BHK', 'total_sqft', 'bathroom']))
```

```
array([89.49179532])
```

```
pipe.predict(pd.DataFrame(['Indira Nagar', '2', '1000', '2'],  
columns=['location', 'size_BHK', 'total_sqft', 'bathroom']))
```

```
array([136.78987714])
```

❖ Backend:

- **Description:** In this module we had connected our trained model with this Django website.

```
from django.shortcuts import render

import pandas as pd

import pickle

def predict_price_actual(request):

    model = pickle.load(open('BangaloreHousePricePredictionModel.pkl', 'rb'))

    location = request.GET['location']

    sqft = request.GET['sqft']

    bath = request.GET['bath']

    bhk = request.GET['bhk']

    print(location, "\n")

    print(sqft, "\n")

    print(bath, "\n")

    print(bhk, "\n")

    prediction = model.predict(pd.DataFrame([[location, bhk, sqft, bath]],
columns=["location", "size_BHK", "total_sqft", "bathroom"]))

    print(prediction, "rupees")

    return render(request, "result.html", {'ans': prediction[0]})
```

4IT31: Project - I

The screenshot shows a web browser window with the URL `127.0.0.1:8000/predict_price`. The page title is "Angel Real Estate" and the navigation bar includes "Home", "Prediction", "logout", and "About Us". The main content area has the heading "Please fill up this form to Predict House Price." and contains four input fields: "Select Location" (with "1st Phase JP Nagar" selected), "Total Square Feet" (with "1000"), "Total Bathrooms" (with "2"), and "Total BHK" (with "2"). A "Predict" button is at the bottom of the form. The footer shows "© Copyright 2021 By Angel Real Estate." and the Windows taskbar at the bottom displays the date and time as 09:15 on 21/10/2021.

The screenshot shows the same web browser window after the prediction. The URL in the address bar is `127.0.0.1:8000/predict_price_actual?location=1st+Phase+JP+Nagar&sqft=1000&bath=2&bhk=2`. The main content area displays the result: "Price = ₹ 89.49179531851236 lakhs". The footer remains the same, showing "© Copyright 2021 By Angel Real Estate." and the Windows taskbar at the bottom displays the date and time as 09:16 on 21/10/2021.

3 – Ending Note:

Here we conclude our project-I. We had completed all our work remaining from last report. Please give your valuable suggestions so we can now work on it and can complete it in permit able time.

4 - Conclusion:

As part of second mid presentation we have completed our SRS and other three progress report and also, we are done with around 80% - 90% work on actual system implementation. If some changes are required then we will take that into consideration and do changes in completed work.

******The End******