

House price predictor (GhorbariBechaKena.com)



Project Members:

1.

Niamul Hasan

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2.

Md. Anik Khan

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Tahura Nasrin

Id:17201031

Version Control System:

<https://github.com/niamul64/GhorBariKenaBecha-ecommerce-website-by-django-and-machine-learning.git>

Website Hosted to This Link:

<http://niamul26.pythonanywhere.com/>

Profile:

Niamul Hasan: Backend developing and hosting the website.

(github: <https://github.com/niamul64>)

MD. Anik Khan: Frontend developing.

(github: <https://github.com/CodeAnik>)

Tahura Nasrin: Quality assurance sector.

(github: <https://github.com/Tahura31>)

1.Purpose/objective of the project:

We will build a proper, Dedicated, free E-commerce website for the people of Dhaka city, where they will be able to post advertisements about lands, flats, and apartments.

Also, we will provide a machine learning-based flat price predicting system where people will be able to predict the price of a flat based on some inputs.

2.Project problem definition in details:

There are many e-commerce websites to post Advertisements to sell or buy products (bikroy.com, ebazar.evaly.com.bd). Recently bikroy.com became a paid website (you need to pay, for post-Advertise).

There is no dedicated free E-commerce website to post advertisements about houses, lands, apartments (in Dhaka city). On the other hand, selling the land or flat through a broker is also not financially efficient for both sides, buyer and seller. So, it is difficult for the people of Dhaka city, to buy or sell, a flat or land at a good price.

Here a dedicated website may solve the problem.

Furthermore, often a person who newly thinking to buy a flat, do not have the proper idea about pricing. So, a flat price predicting system with this dedicated website may help that person.

3.Benefits of the Project:

I. Effect on Society: Basically, this is an e-commerce web application. The impact of the application could be like other e-commerce web apps. The website will provide easy to use buy-and-sell platform. It will help the people of society to become economically benefited by buying or selling houses, apartments, lands at competitive prices.

II. Effect on environment: This project dose not have any bad effect on environment.
This software is not consuming any energy from environment.

III. Sustainability: We built this Web-app on django2.2. This website making frame-work provides better security, sustainability. So, we can say that, our system is sustainable.

4. Investigation:

Depth of analysis is required to select the most feasible machine learning model. We studied about other machine learning models (Single-Variable -Linear-Regression-Model, Naïve Bayes) and we picked Multivariable-Linear-Regression-model for our project

5. Project Management and finance:

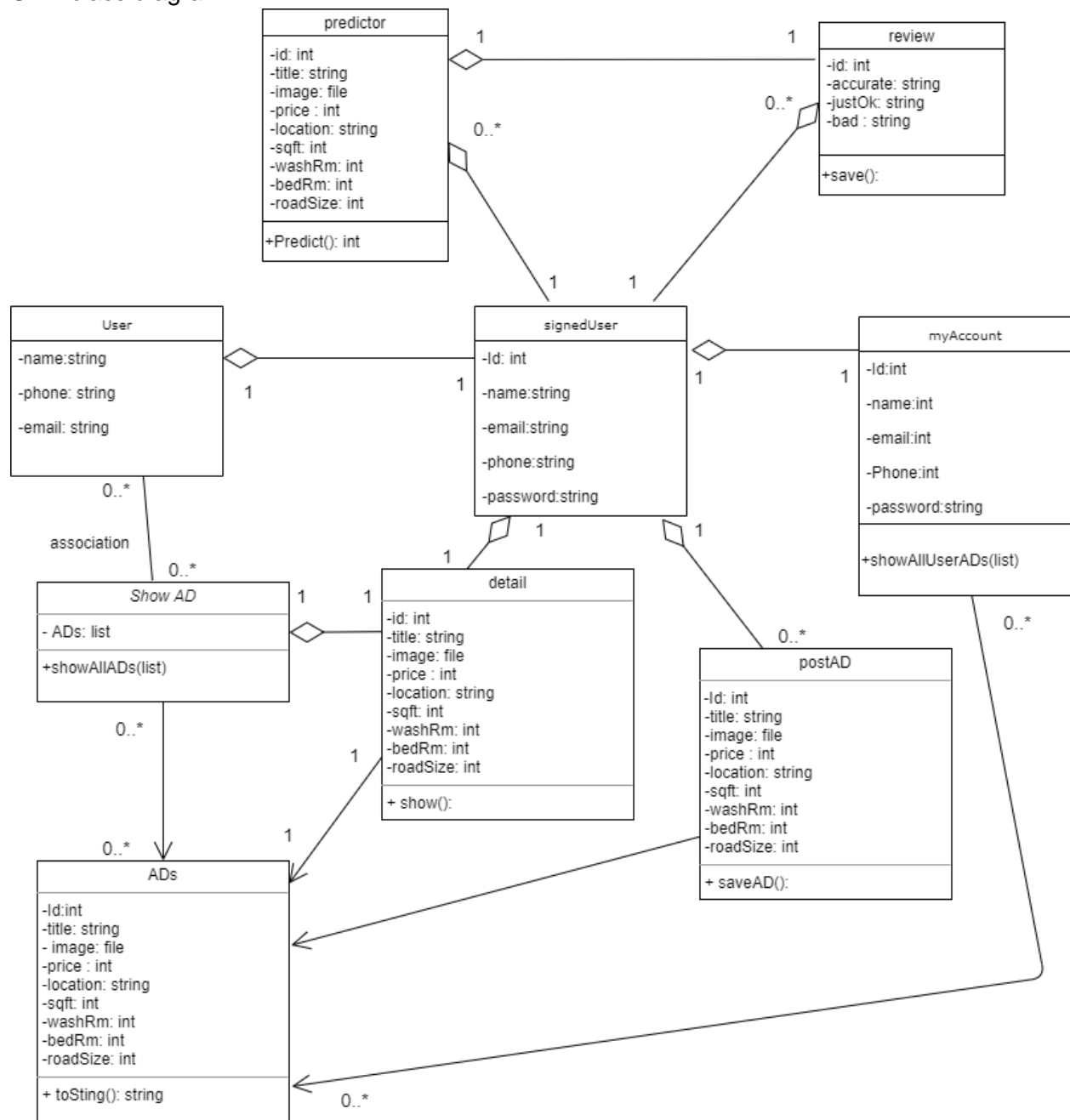
Suppose, we are working for a company and doing contract based project.(cash Amount depends on weekly work)

Week	Work	Workers on lead	Cash Amount
1	Project Idea Finding	Niamul Hasan, Md. Anik Khan, Tahura Nasrin	10000
2,3	System Analysis and Design	Niamul Hasan, Md. Anik Khan, Tahura Nasrin	10000
4	Database Design	Niamul Hasan, Tahura Nasrin	10000
5	Database Implementation	Niamul Hasan	10000
6,7	Backend Developing, Frontend Developing	Niamul Hasan, Md. Anik Khan,	20000
8	Quality assuring	Tahura Nasrin	10000
9,10,11	Backend Developing, Frontend Developing, Quality assuring	Niamul Hasan, Md. Anik Khan, Tahura Nasrin	20000

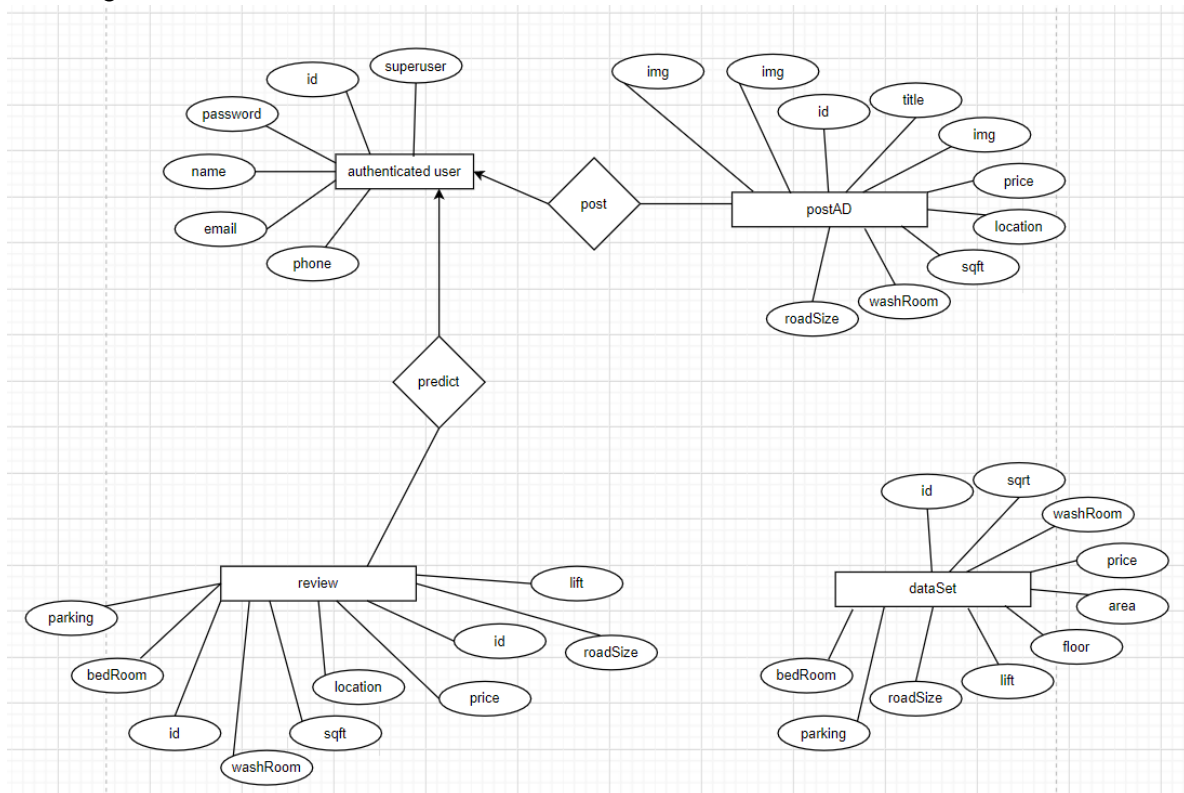
12	Project Demonstration and report generation	Niamul Hasan, Md. Anik Khan, Tahura Nasrin	15000
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6. Design model of solution:

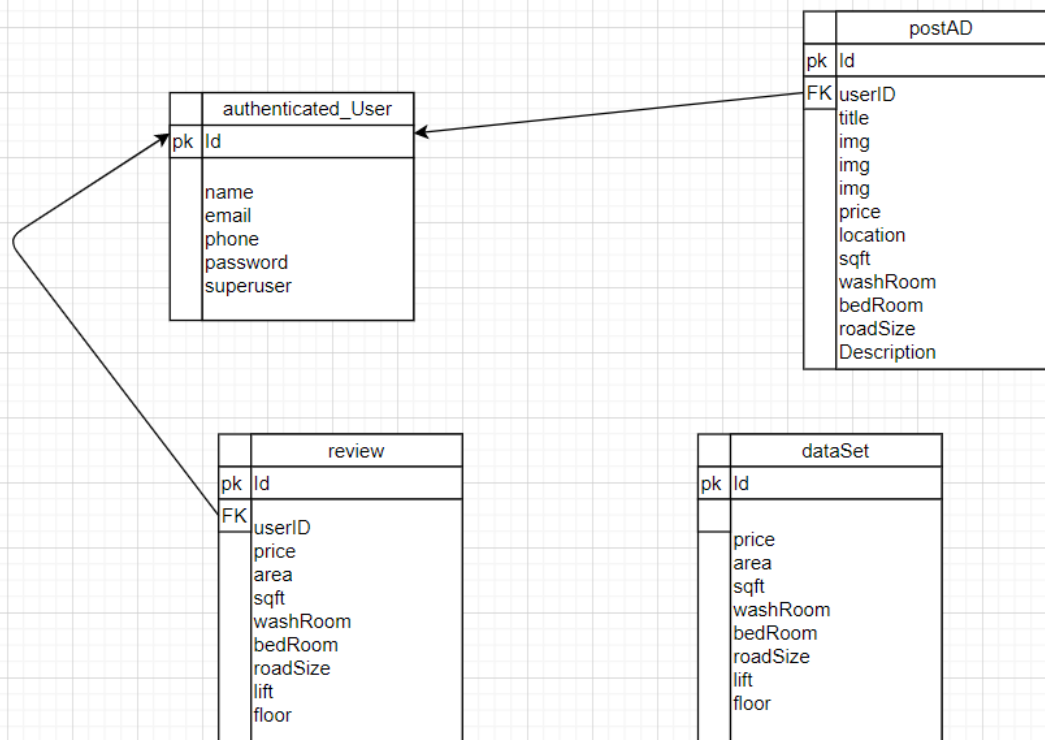
UML class diagram:



ER-Diagram:



Schema diagram:



Project Developing resource:

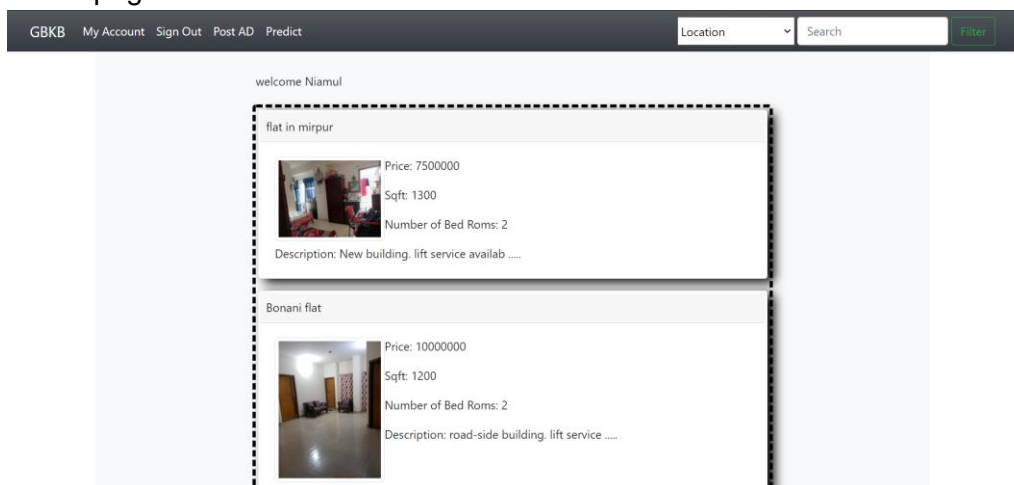
1. sqlite3 (database)
2. Django2.2 (framework)
3. Joblib (package)

7. Risk Analysis:

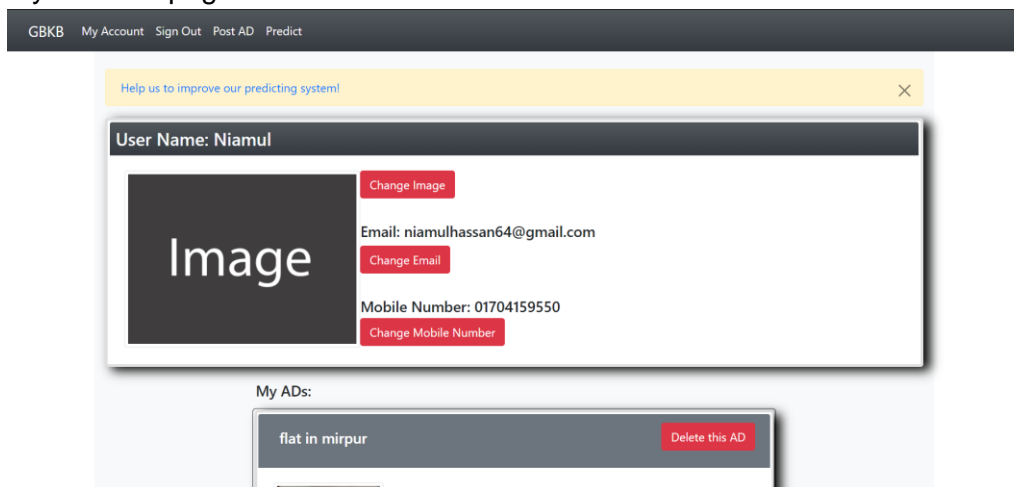
At first, we had started our project with python3.8 environment. we used joblib to use our machine learning model in django2.2. But later we faced a problem that we getting unexpected error for using joblib in python3.8 environment. After a lot of research, we found that joblib package works till the python version 3.7. joblib package wont work on python3.8.

8. Final Project (sample image):

Home page:



My Account page:



AD posting page:

[GBKB](#) [My Account](#) [Sign Out](#) [Post AD](#) [Predict](#)

AD Posting:

Title*

Location*

Location

Img1

Choose File

No file chosen

Img2

Choose File

No file chosen

Img3

Choose File

No file chosen

Sqft*

WashRoom*

BedRoom*

Description

Price prediction page:

[GBKB](#) [My Account](#) [Sign Out](#) [Post AD](#) [Predict](#)

Provide proper inputs to predict the value of an apartment which you may be looking for:

Area:

Location

Square feet:

WashRoom:

BedRoom:

Floor:

Lift:


Lift

About page:


Not secure | niamul26.pythonanywhere.com/about

Apps Overleaf, Online La... intellectual property CopotronicRaf/pat... SWISH -- SWI-Pro... How I Sold My Pyth... Josephus Problem... [Download] Django... CSS3.0 Maker | CSS...


Our Team



Md. Niamul Hasan
BACK-END DEVELOPER
Stuent of University of Asia Pacific



Md. Anik Khan
FRONT-END DEVELOPER
Student of University of Asia Pacific



Tahura Nasrin Rumey
QUALITY ASSURANCE ENGINEER
Student of University of Asia Pacific

9. Testing And Debugging Report:

Unittests in test1.py: 7 total, 1 failed, 6 passed 3 m 23 s

Collapse | Expand

test1 3 m 23 s

SimpleTest 3 m 23 s

test1_signInSignUp	passed	30.65 s
test2_signup	passed	27.70 s
test3_adView	passed	32.56 s
test5_adViewWithOutSignIn	passed	19.17 s
test6_PostAD	passed	30.70 s
test7_PostAD_WithIntentionallyError	failed	31.51 s

matched
Your AD is != Your AD is posted
Expected :
Your AD is posted
Actual :
Your AD is
Traceback (most recent call last):
File "C:\Program Files\JetBrains\PyCharm Community Edition with Anaconda plugin 2019.2.3\helpers\pycharm\teamcity\diff_tools.py", line 32, in _patched_equals
old(self, first, second, msg)
File "C:\Users\user 1\AppData\Local\Programs\Python\Python38-32\lib\unittest\case.py", line 912, in assertEqual
assertion_func(first, second, msg=msg)
File "C:\Users\user 1\AppData\Local\Programs\Python\Python38-32\lib\unittest\case.py", line 1292, in assertMultiLineEqual
self.fail(self._formatMessage(msg, standardMsg))
File "C:\Users\user 1\AppData\Local\Programs\Python\Python38-32\lib\unittest\case.py", line 753, in fail
raise self.failureException(msg)
AssertionError: "Your AD is posted" != "Your AD is"

matched
During handling of the above exception, another exception occurred:
Traceback (most recent call last):
File "C:\Users\user 1\AppData\Local\Programs\Python\Python38-32\lib\unittest\case.py", line 60, in testPartExecutor
yield
File "C:\Users\user 1\AppData\Local\Programs\Python\Python38-32\lib\unittest\case.py", line 676, in run
self._callTestMethod(testMethod)
File "C:\Users\user 1\AppData\Local\Programs\Python\Python38-32\lib\unittest\case.py", line 633, in _callTestMethod
method()
File "D:\github uploads\software dev project\testingForProject\testing\test1.py", line 180, in test7_PostAD_WithIntentionallyError
self.assertEqual(self.driver.find_element(By.XPATH, 'html/body/div/div/div/p[2]').text, "Your AD is", "matched") # should be passed

test8_PredictingHousePrice passed 31.19 s

10. Testing And Debugging Report:

We learned how to use a machine learning model in a django project.
We learned about joblib package.

11. Deployment :

The website is deployed to this link:

<http://niamul26.pythonanywhere.com/>

Otherwise, if You want to deploy this website in local machine: (follow the steps)

1. At first set up the virtual environment. (python 3.7)
2. clone the GitHub directory, under that environment. (\$ git clone <https://github.com/niamul64/GhorBariKenaBecha-ecommerce-website-by-django-and-machine-learning.git>)
3. Now change directory to 'GBKB'. (\$ cd GBKB)
4. Install Django==2.2 (\$ pip install Django==2.2)
5. Now again change directory to Django project 'GBKB'. (\$ cd GBKB)
6. Now run commands(1 by 1):
 - \$ pip install django-crispy-forms
 - \$ pip install requests
 - \$ pip install -U scikit-learn
 - \$ pip install numpy
 - \$ pip install joblib
 - \$ pip install Django-Verify-Email
 - \$ pip install pillow
 - \$ python manage.py collectstatic
 - \$ python manage.py makemigrations
 - \$ python manage.py migrate
 - \$ python manage.py runserver
7. Now the server is running.