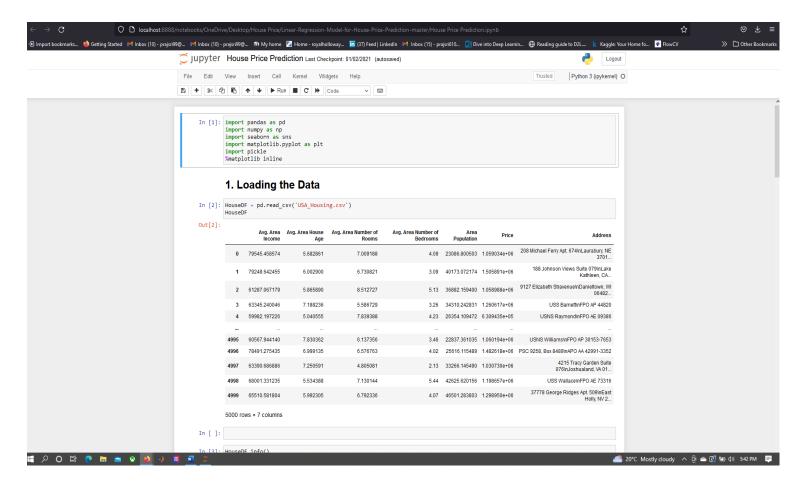# Data Science Intern at Data Glacier
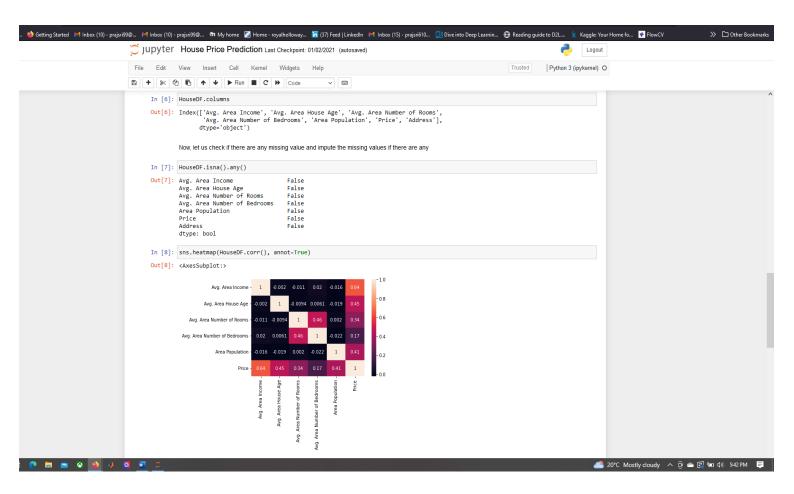
Name: Prajwal Sridhar

Batch Code: LISUM14
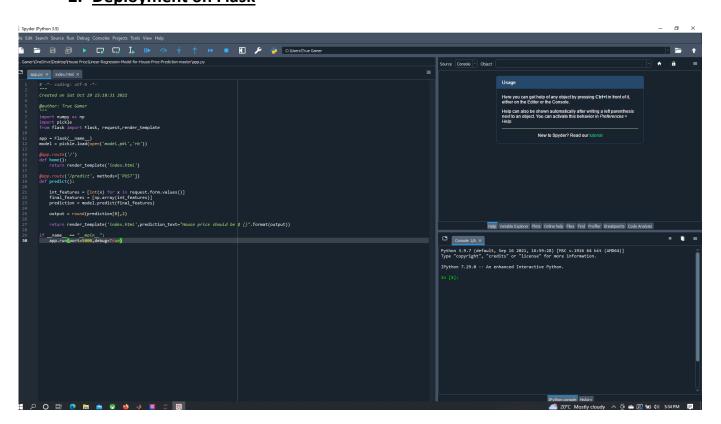
Submission Date: 28/10/2022

1. Model Building

Jupyter **House Price Prediction** Last Checkpoint: 01/02/2021 (autosaved)

File Edit View Insert Cell Kernel Widgets Help

Trusted   Python 3 (ipykernel)

In [6]: `HouseDF.columns`

Out[6]: Index(['Avg. Area Income', 'Avg. Area House Age', 'Avg. Area Number of Rooms',
        'Avg. Area Number of Bedrooms', 'Area Population', 'Price', 'Address'],
       dtype='object')

Now, let us check if there are any missing value and impute the missing values if there are any

In [7]: `HouseDF.isna().any()`

Out[7]:
```
Avg. Area Income                False
Avg. Area House Age             False
Avg. Area Number of Rooms       False
Avg. Area Number of Bedrooms    False
Area Population                 False
Price                           False
Address                         False
dtype: bool
```

In [8]: `sns.heatmap(HouseDF.corr(), annot=True)`

Out[8]: <AxesSubplot:>

20°C Mostly cloudy   5:42 PM

2. <u>Deployment on Flask</u>

Spyder (Python 3.9)

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C:\Users\True Gamer

..Gamer\OneDrive\Desktop\House Price\Linear-Regression-Model-for-House-Price-Prediction-master\app.py

app.py   index.html

```python
# -*- coding: utf-8 -*-
"""
Created on Sat Oct 29 15:18:31 2022

@author: True Gamer
"""
import numpy as np
import pickle
from flask import Flask, request,render_template

app = Flask(__name__)
model = pickle.load(open('model.pkl','rb'))

@app.route('/')
def home():
    return render_template('index.html')

@app.route('/predict', methods=['POST'])
def predict():

    int_features = [int(x) for x in request.form.values()]
    final_features = [np.array(int_features)]
    prediction = model.predict(final_features)

    output = round(prediction[0],2)

    return render_template('index.html',prediction_text="House price should be $ {}".format(output))

if __name__ == "__main__":
    app.run(port=5000,debug=True)
```

Source Console Object

Usage

Here you can get help of any object by pressing Ctrl+I in front of it, either on the Editor or the Console.

Help can also be shown automatically after writing a left parenthesis next to an object. You can activate this behavior in Preferences > Help.

New to Spyder? Read our tutorial

Help Variable Explorer Plots Online help Files Find Profiler Breakpoints Code Analysis

Console 1/A

```
Python 3.9.7 (default, Sep 16 2021, 16:59:28) [MSC v.1916 64 bit (AMD64)]
Type "copyright", "credits" or "license" for more information.

IPython 7.29.0 -- An enhanced Interactive Python.

In [1]:
```

IPython console History

20°C Mostly cloudy   5:34 PM

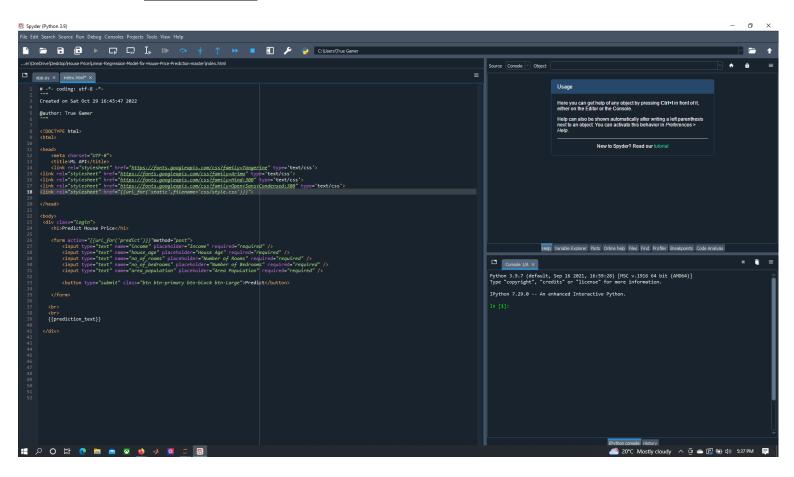## 3. Index.html file


```html
# -*- coding: utf-8 -*-
"""
Created on Sat Oct 29 16:43:47 2022

@author: True Gamer
"""

<!DOCTYPE html>
<html>

<head>
    <meta charset="UTF-8">
    <title>ML API</title>
    <link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Tangerine" type='text/css'>
<link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Arimo" type='text/css'>
<link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Hind:300" type='text/css'>
<link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Open+Sans+Condensed:300" type='text/css'>
<link rel="stylesheet" href="{{url_for('static',filename='css/style.css')}}">

</head>

<body>
 <div class="Login">
     <h1>Predict House Price</h1>

     <form action="{{url_for('predict')}}"method="post">
         <input type="text" name="income" placeholder="Income" required="required" />
         <input type="text" name="house_age" placeholder="House Age" required="required" />
         <input type="text" name="no_of_rooms" placeholder="Number of Rooms" required="required" />
         <input type="text" name="no_of_bedrooms" placeholder="Number of Bedrooms" required="required" />
         <input type="text" name="area_population" placeholder="Area Population" required="required" />

         <button type="submit" class="btn btn-primary btn-block btn-Large">Predict</button>

     </form>

     <br>
     <br>
     {{prediction_text}}

 </div>
```

4. <u>Result</u>

-*- coding: utf-8 -*- """ Created on Sat Oct 29 16:43:47 2022 @author: True Gamer """

Predict House Price

| Income | House Age | Number of Rooms | Number of Bedrooms | Area Population | Predict |

House price should be $ 2342651.52