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•  Jupyter_No...	1 minute ago

Jupyter\_Notebook.ipynb







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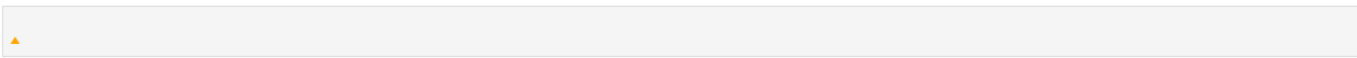
Open in... Python 3 (ipykernel)







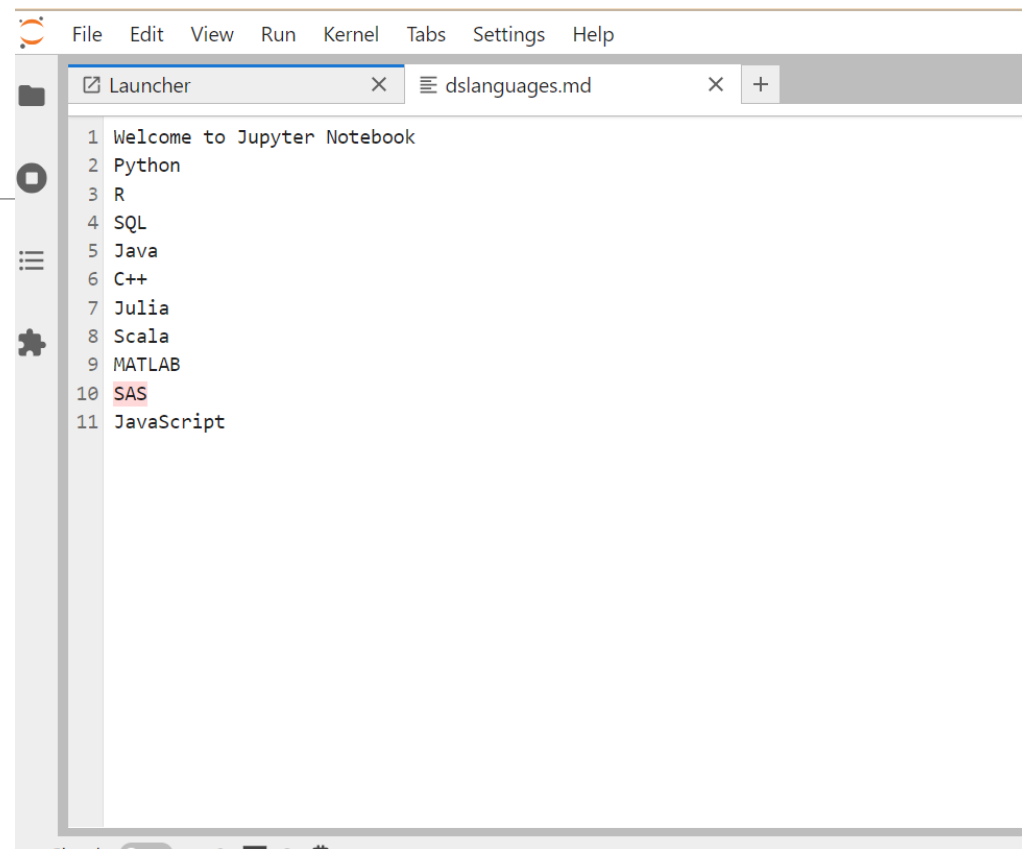
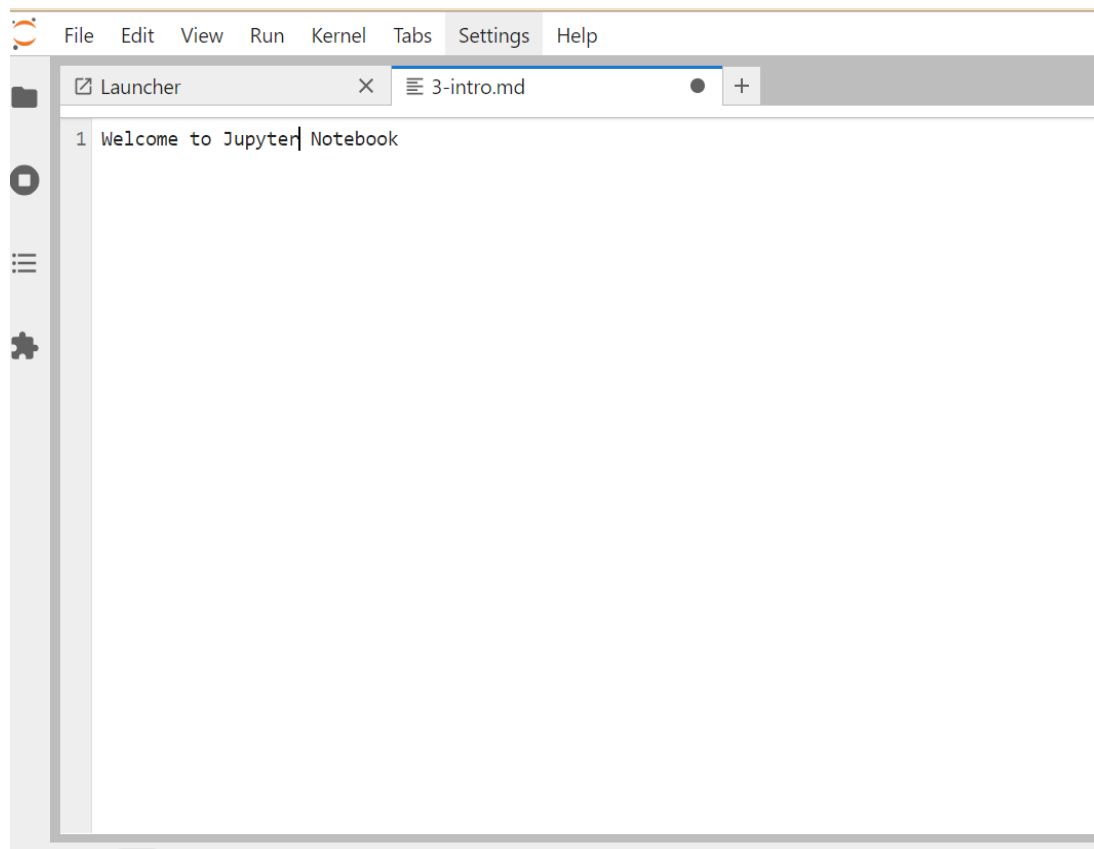
Skills Network

Add your code below following the instructions given in the course

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```
1 # Introduction to Data Science Libraries
2
3 Below is a list of commonly used data science libraries in Python:
4
5 1. NumPy
6 2. Pandas
7 3. Matplotlib
8 4. Seaborn
9 5. Scikit-learn
10 6. Statsmodels
11 7. SciPy
12 8. TensorFlow
13 9. Keras
14 10. PyTorch
15 11. NLTK
16 12. spaCy
17 13. XGBoost
18 14. LightGBM
19
```

Launcher X dslanguages.md X 5-dstools.md X Launcher X +

```
1 # Data Science Tools
2
3 Tool      | Description |
4 -----|-----|
5 Jupyter Notebook | An open-source web application for creating and sharing documents with live code. |
6 Pandas      | A library for data manipulation and analysis using DataFrames. |
7 NumPy       | A library for numerical computations and array operations. |
8 Matplotlib  | A library for creating static, animated, and interactive visualizations in Python. |
9 Scikit-learn | A machine learning library for Python that offers simple and efficient tools for data mining and analysis. |
10 TensorFlow  | An open-source framework for machine learning and deep learning applications. |
11 Keras       | A high-level neural networks API that runs on top of TensorFlow. |
12 PyTorch     | An open-source deep learning framework that offers flexibility and speed. |
13
```

Ln 13, Col 1 | Spaces: 4 | 5-dstools.md | English (United States)

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▼ Multiply and add integers

num1 = 5 num2 = 3 num3 = 10

Multiply num1 and num2 ¶

product = num1 \* num2

Add product to num3

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▼ Open in... Python 3 (ipykernel)

▼ Introduction to Arithmetic Expressions

Below are some examples of arithmetic expressions in Python: result = 5 + 3 # result is 8 result = 10 - 4 # result is 6 result = 7 \* 6 # result is 42

[ ]:

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Open in... Python 3 (ipykernel)

## Convert minutes to hours

```
def convert_minutes_to_hours(minutes): hours = minutes / 60 return hours
```

## Example usage

```
minutes = 120 hours = convert_minutes_to_hours(minutes)

print(f'{minutes} minutes is equal to {hours} hours.')
```

[ ]:

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Open in... Python 3 (ipykernel)

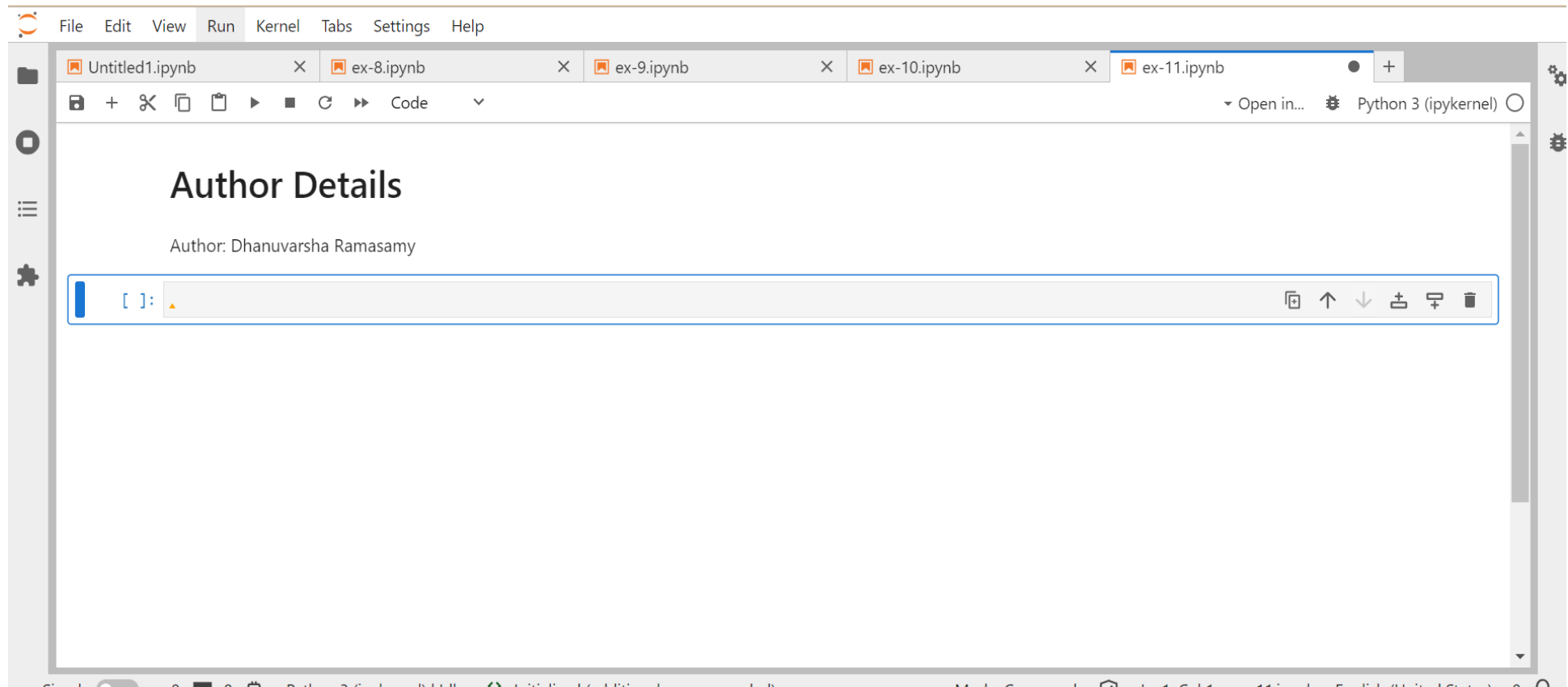
## Objectives

The main objectives of this notebook are:

- To understand basic arithmetic operations in Python.
- To learn how to define functions for conversions.
- To apply Python programming skills in data science tasks.

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Code

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▼ Open in...Python 3 (ipykernel)

```
# Display the first five rows
tesla_data.head()
```

[\*\*\*\*\*100%\*\*\*\*\*] 1 of 1 completed

[3]:

	Price	Date	Adj Close	Close	High	Low	Open	Volume
Ticker			TSLA	TSLA	TSLA	TSLA	TSLA	TSLA
0		2020-01-02 00:00:00+00:00	28.684000	28.684000	28.713333	28.114000	28.299999	142981500
1		2020-01-03 00:00:00+00:00	29.534000	29.534000	30.266666	29.128000	29.366667	266677500
2		2020-01-06 00:00:00+00:00	30.102667	30.102667	30.104000	29.333332	29.364668	151995000
3		2020-01-07 00:00:00+00:00	31.270666	31.270666	31.441999	30.224001	30.760000	268231500
4		2020-01-08 00:00:00+00:00	32.809334	32.809334	33.232666	31.215334	31.580000	467164500

[ ]:

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Open in...Python 3 (ipykernel)

```
else:
    print(f"Failed to retrieve data: {response.status_code}")
```

Number of tables found: 6  
Tesla Annual Revenue (Millions of US \$) \

10	2013
11	2012
12	2011
13	2010
14	2009

Tesla Annual Revenue (Millions of US \$).1

10	\$2,013
11	\$413
12	\$204
13	\$117
14	\$112

/tmp/ipykernel\_1043/2098674100.py:18: FutureWarning: Passing literal html to 'read\_html' is deprecated and will be removed in a future version. To read from a literal string, wrap it in a 'StringIO' object.  
tables = pd.read\_html(response.text)

[ ]:



FileEditViewRunKernelTabsSettingsHelp

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Open in...Python 3 (ipykernel)

```
# Display the last five rows
print(gme_revenue.tail())
else:
    print(f"Failed to retrieve data: {response.status_code}")
```

Number of tables found: 6

	GameStop Annual Revenue (Millions of US \$) \
11	2013
12	2012
13	2011
14	2010
15	2009

GameStop Annual Revenue (Millions of US \$).1

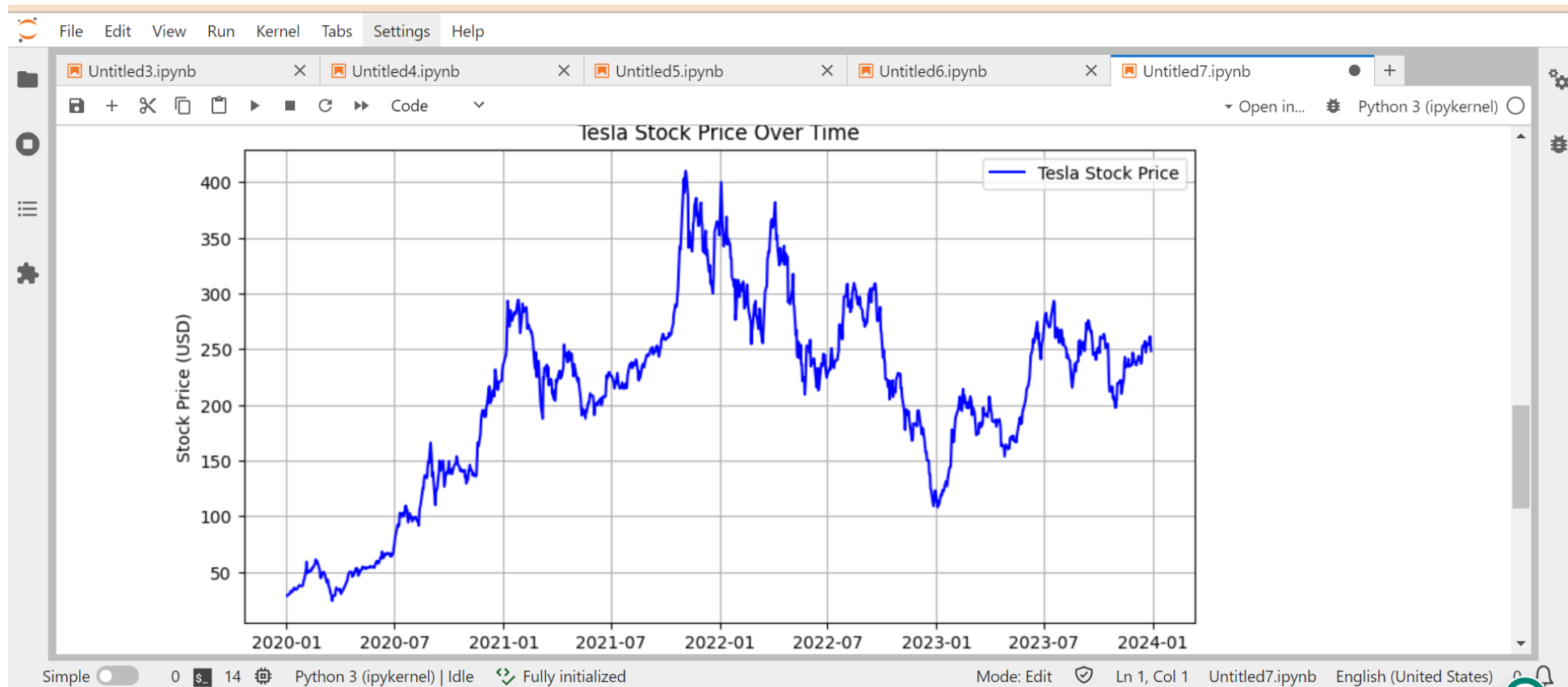
11	\$8,887
12	\$9,551
13	\$9,474
14	\$9,078
15	\$8,806

/tmp/ipykernel\_1162/189654780.py:19: FutureWarning: Passing literal html to 'read\_html' is deprecated and will be removed in a future version. To read from a literal string, wrap it in a 'StringIO' object.

```
tables = pd.read_html(response.text)
```

Simple013Python 3 (ipykernel) | IdleFully initialized

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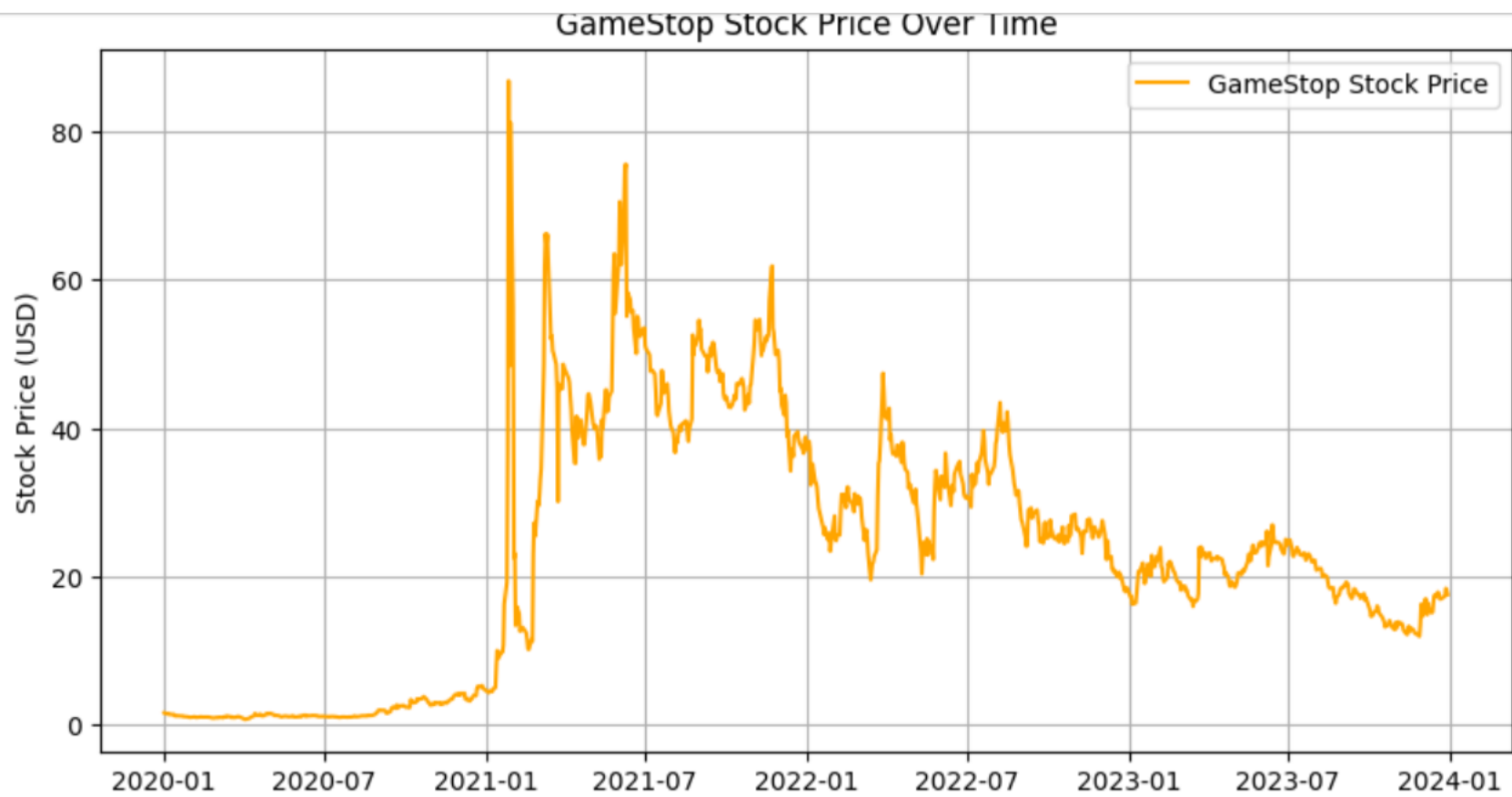
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Code

Open in... Python 3 (ipykernel)



Simple 0 \$ 15 Python 3 (ipykernel) | Idle Fully initialized

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FileEditViewRunKernelTabsSettingsHelp

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Open in...Python 3 (ipykernel)

[1]:

```
import yfinance as yf

# Fetch stock data for GameStop (GME)
gme_data = yf.download('GME', start='2020-01-01', end='2024-01-01')

# Display the data types of each column
print(gme_data.dtypes)
```

[\*\*\*\*\*100%\*\*\*\*\*] 1 of 1 completed

Price	Ticker	
Adj Close	GME	float64
Close	GME	float64
High	GME	float64
Low	GME	float64
Open	GME	float64
Volume	GME	int64
dtype: object		

[ ]:

FileEditViewRunKernelTabsSettingsHelp

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Open in... Python 3 (ipykernel)

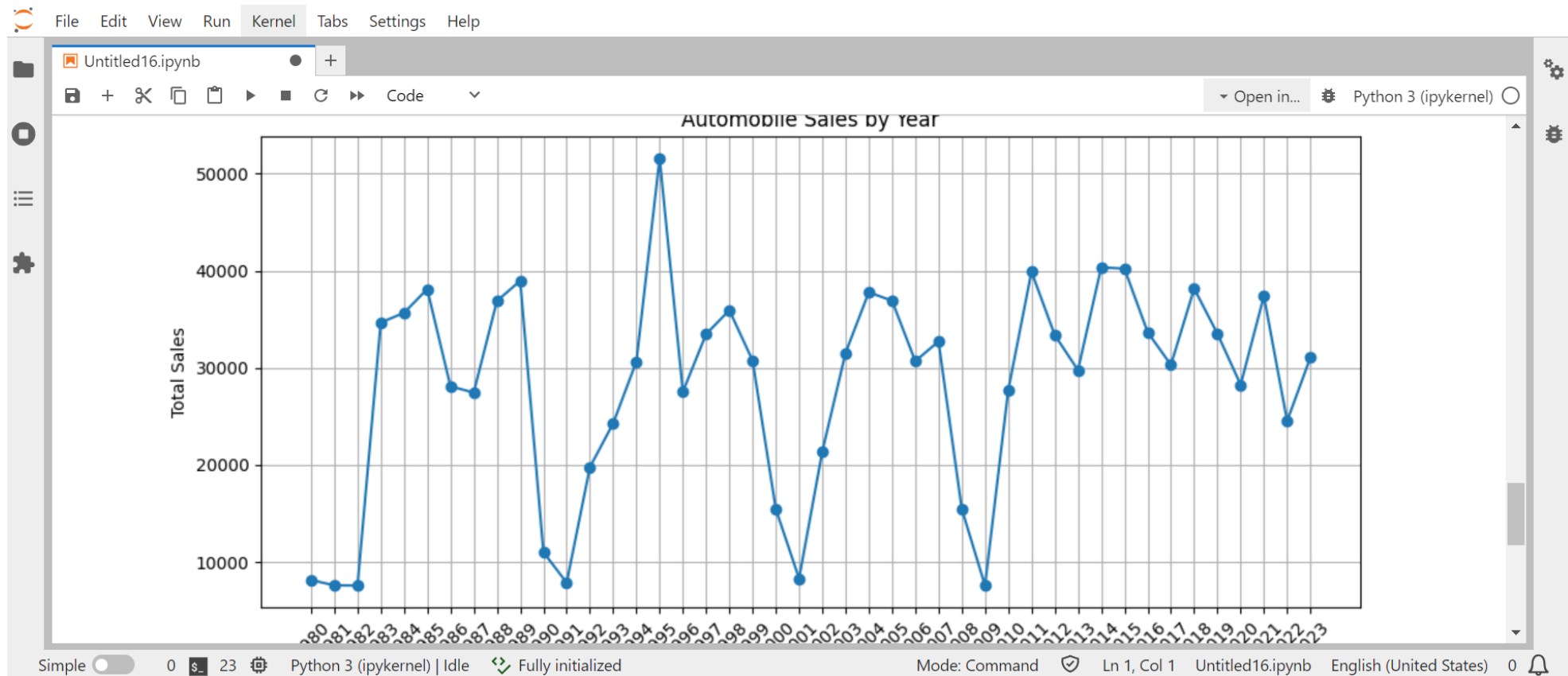
	price	bedrooms	bathrooms	sqft_living	sqft_lot
count	2.161300e+04	21600.000000	21603.000000	21613.000000	2.161300e+04
mean	5.400881e+05	3.372870	2.115736	2079.899736	1.510697e+04
std	3.671272e+05	0.926657	0.768996	918.440897	4.142051e+04
min	7.500000e+04	1.000000	0.500000	290.000000	5.200000e+02
25%	3.219500e+05	3.000000	1.750000	1427.000000	5.040000e+03
50%	4.500000e+05	3.000000	2.250000	1910.000000	7.618000e+03
75%	6.450000e+05	4.000000	2.500000	2550.000000	1.068800e+04
max	7.700000e+06	33.000000	8.000000	13540.000000	1.651359e+06

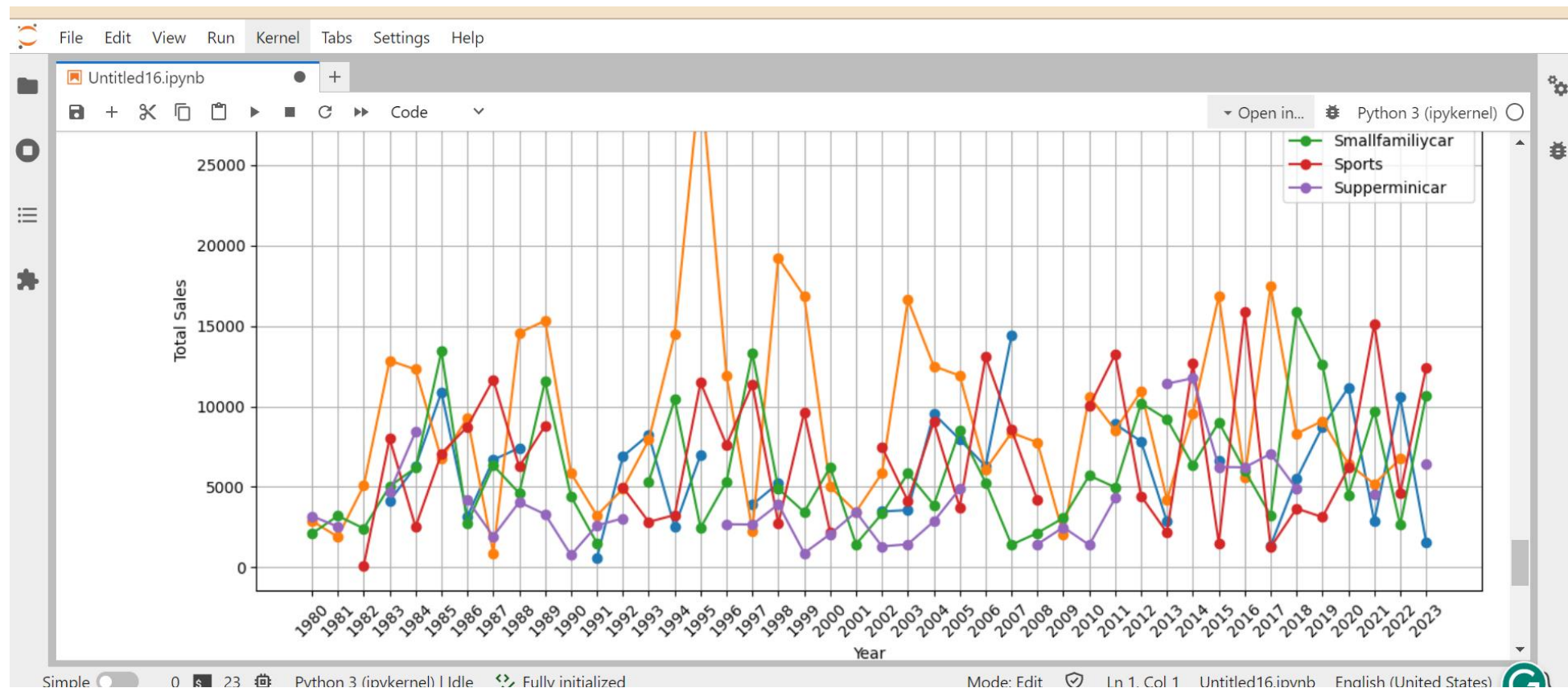
	floors	waterfront	view	condition	grade
count	21613.000000	21613.000000	21613.000000	21613.000000	21613.000000
mean	1.494309	0.007542	0.234303	3.409430	7.656873
std	0.539989	0.086517	0.766318	0.650743	1.175459
min	1.000000	0.000000	0.000000	1.000000	1.000000
25%	1.000000	0.000000	0.000000	3.000000	7.000000
50%	1.500000	0.000000	0.000000	3.000000	7.000000
75%	2.000000	0.000000	0.000000	4.000000	8.000000
max	3.500000	1.000000	4.000000	5.000000	13.000000

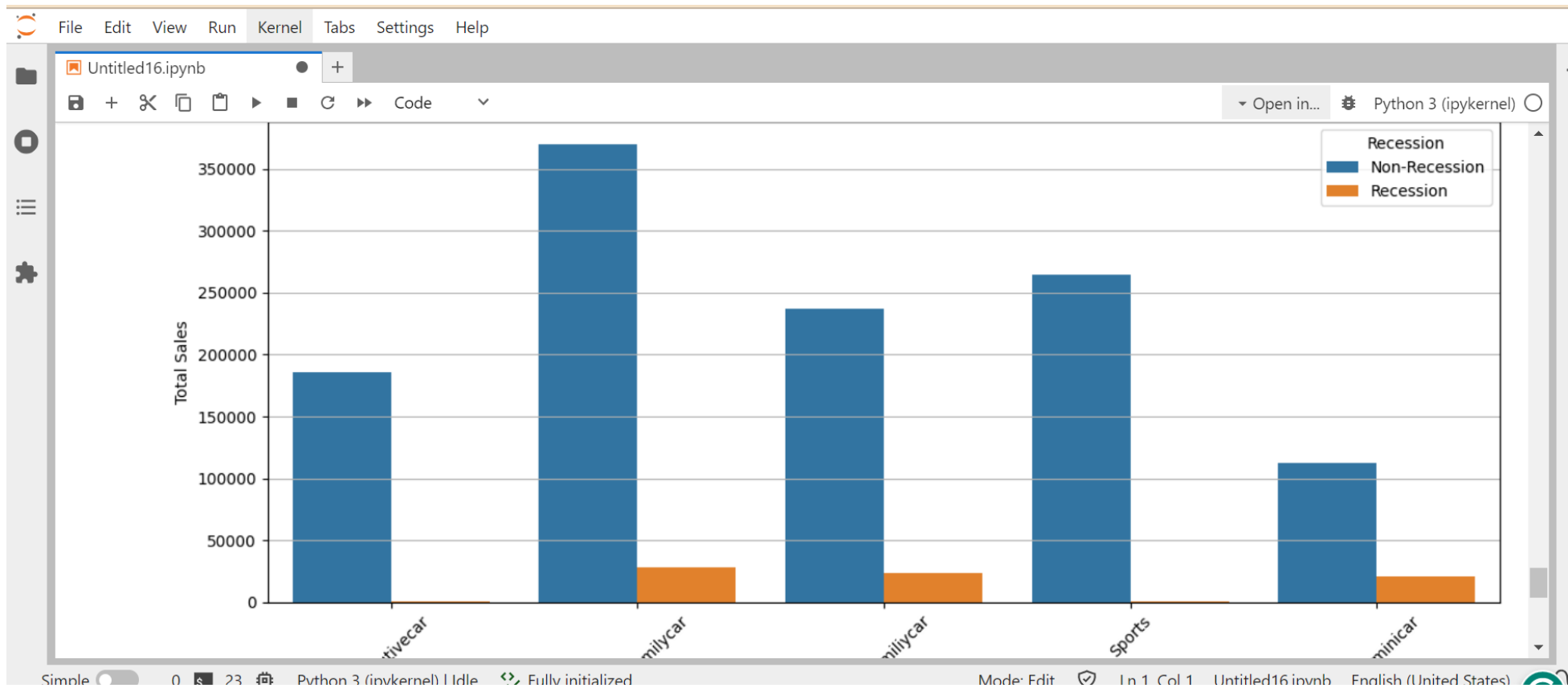
  

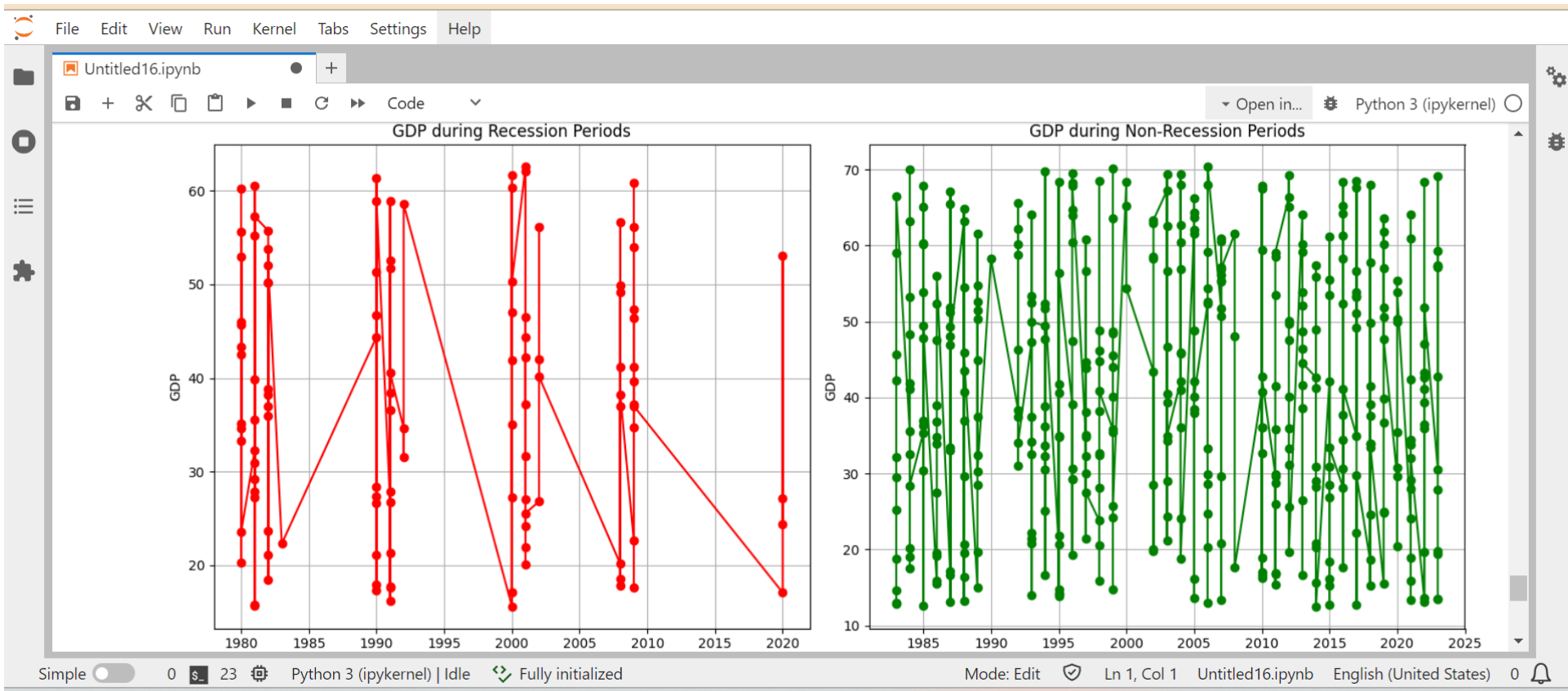
	sqft_above	sqft_basement	yr_built	yr_renovated	zipcode
count	21613.000000	21613.000000	21613.000000	21613.000000	21613.000000
mean	1788.390691	291.509045	1971.005136	84.402258	98077.939805
std	828.090978	442.575043	29.373411	401.679240	53.505026
min	290.000000	0.000000	1900.000000	0.000000	98001.000000

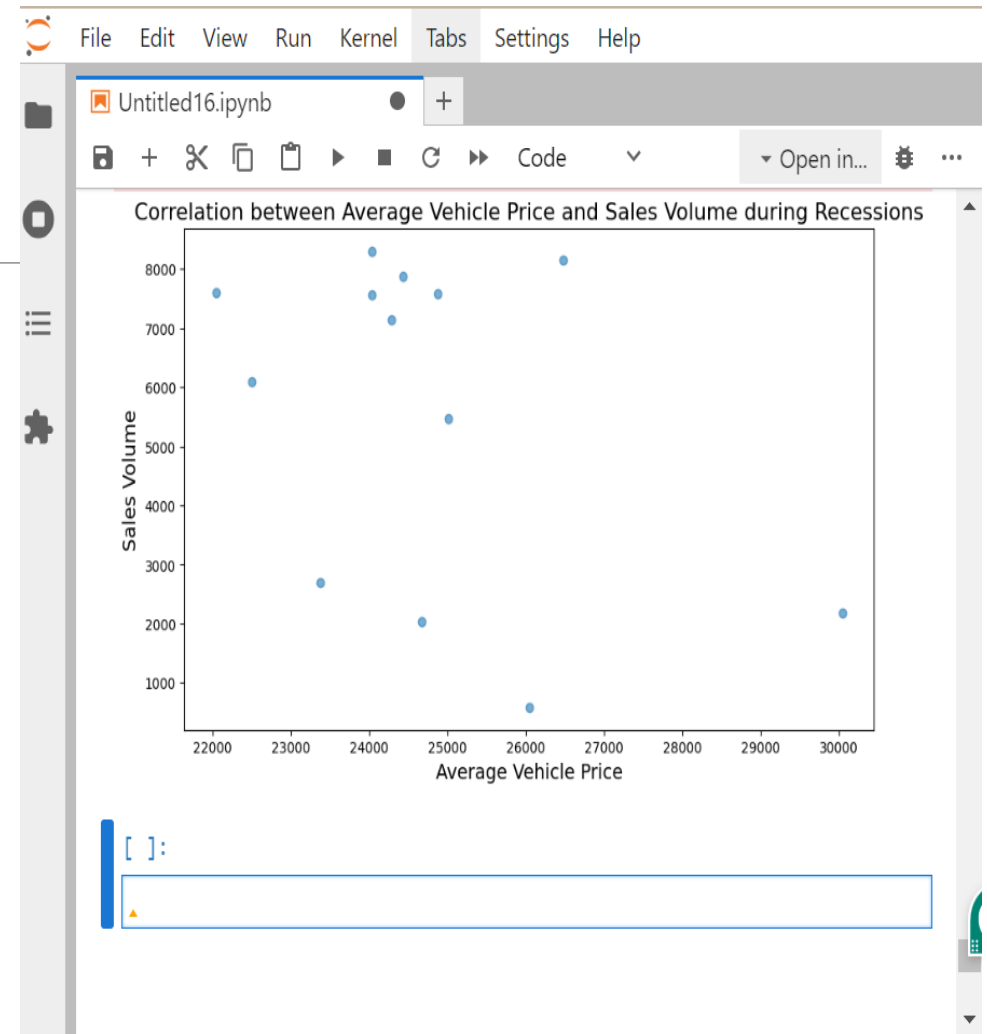
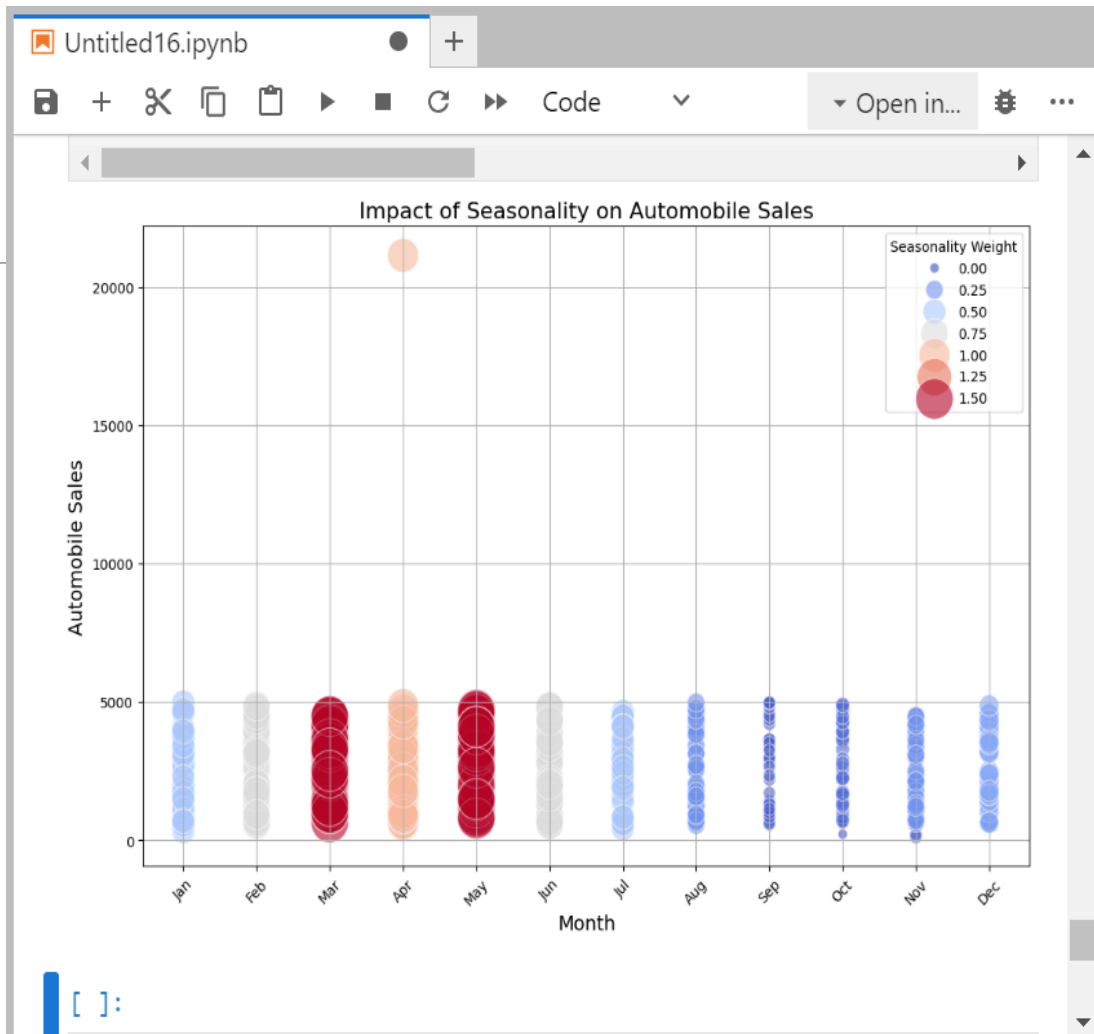


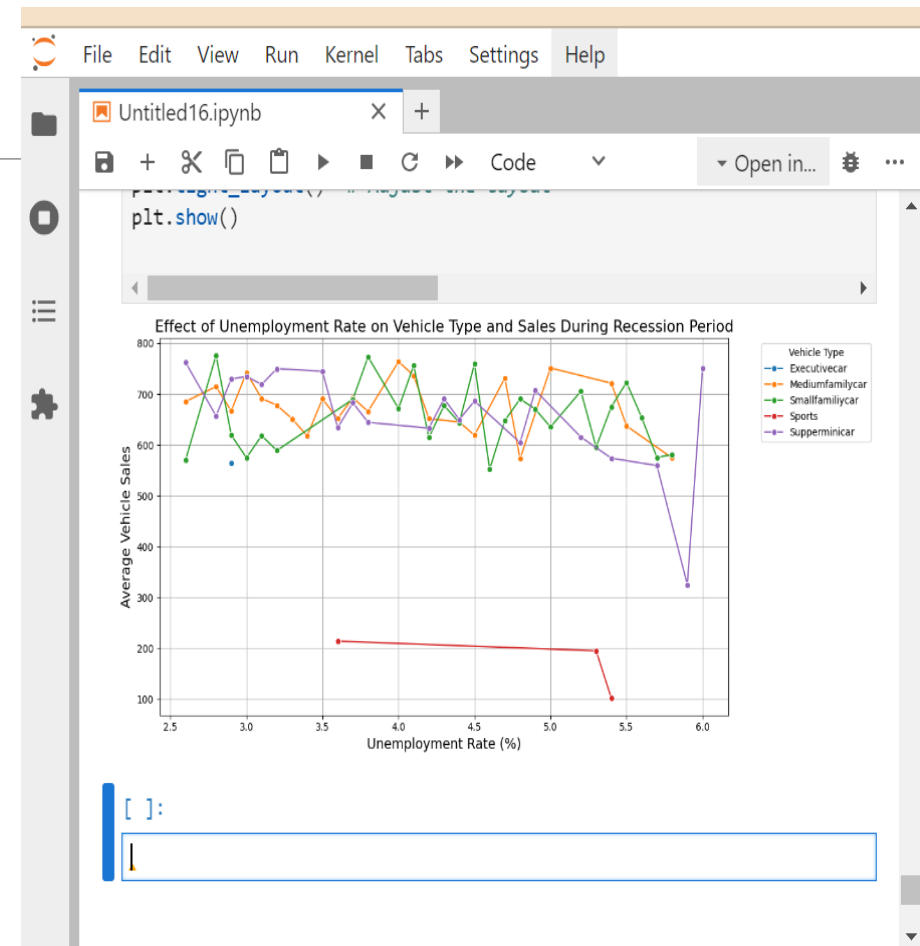
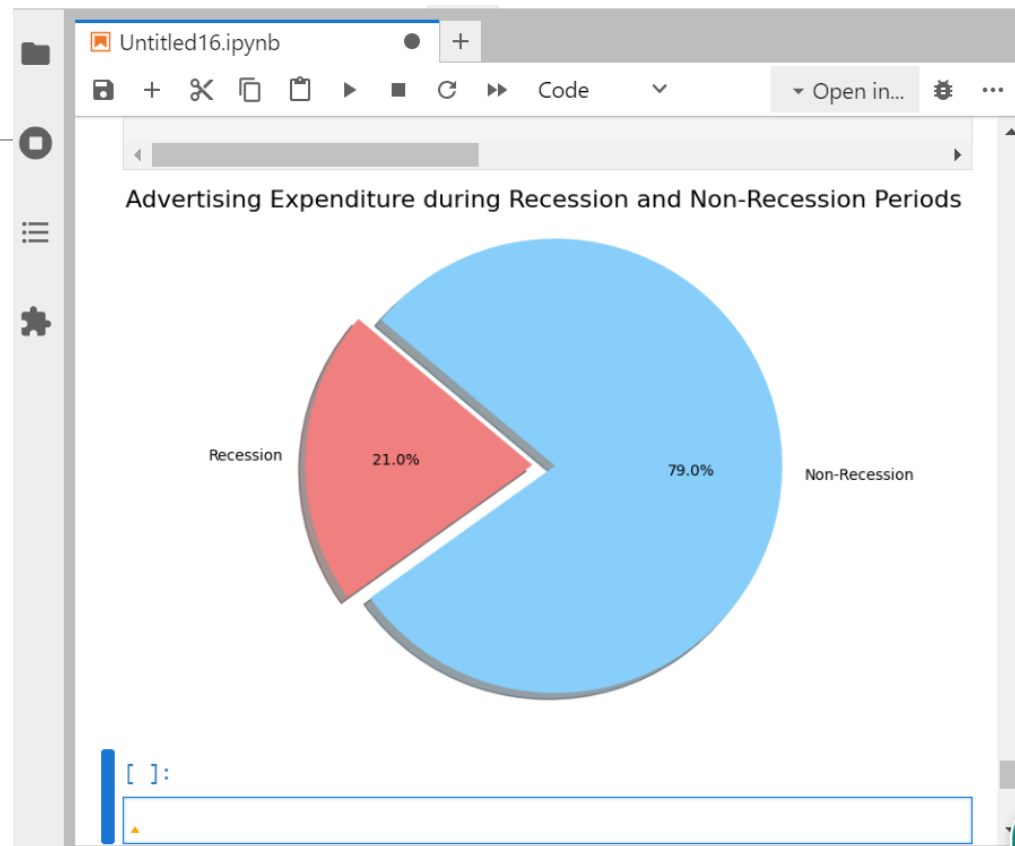


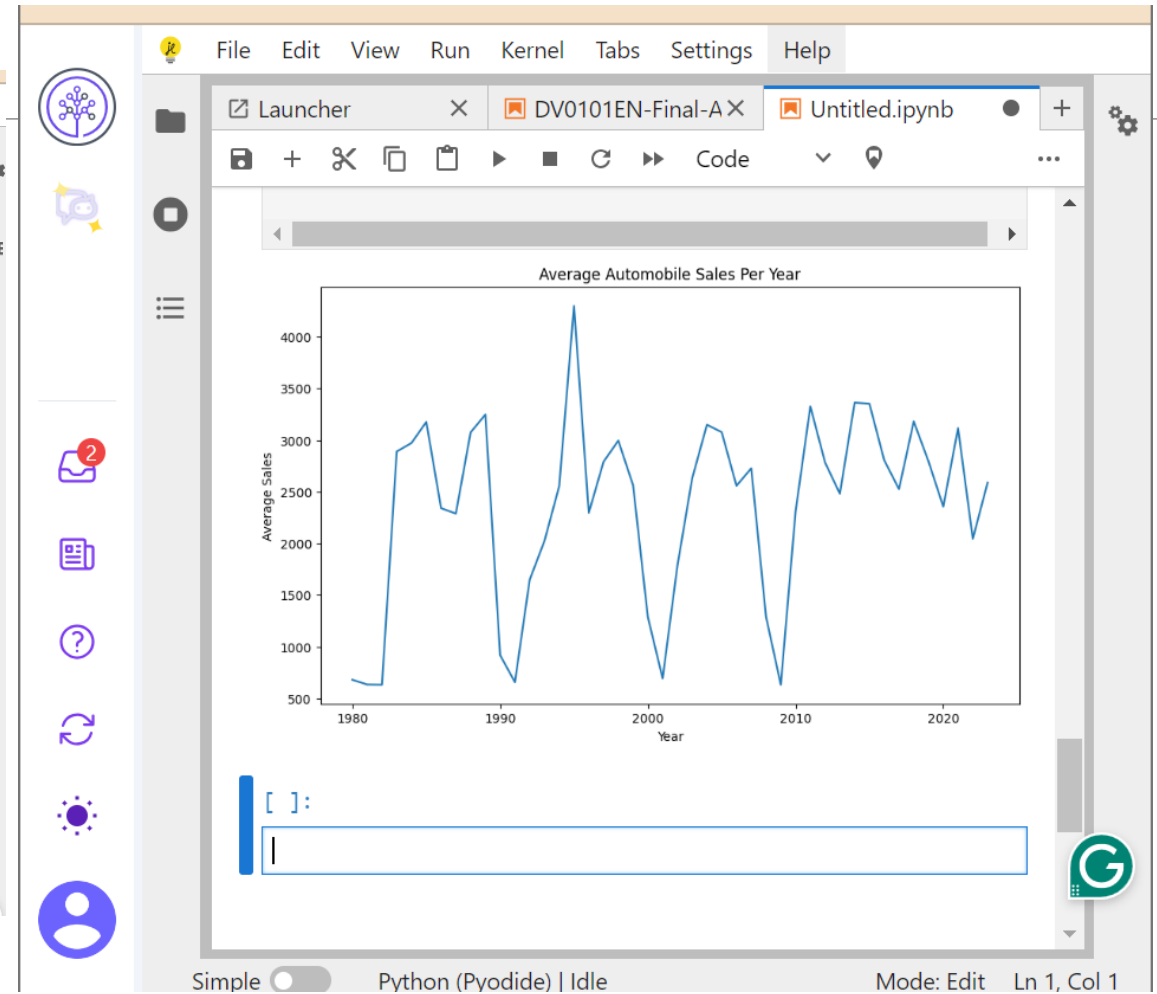
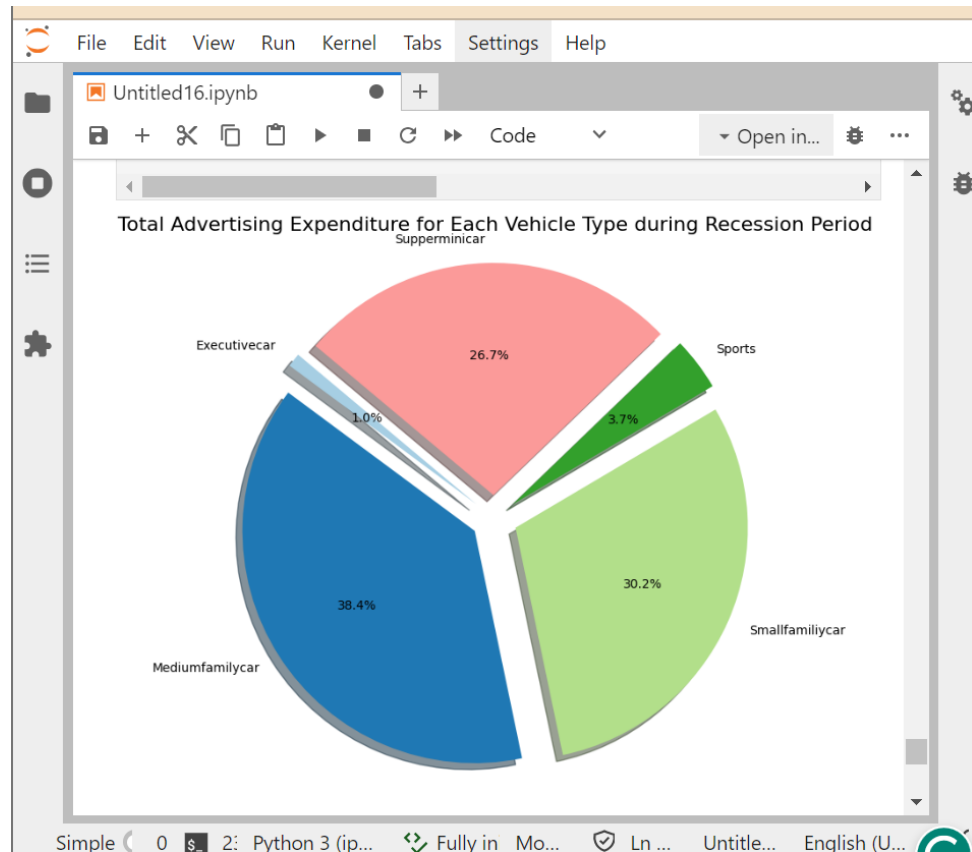






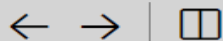








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Your Application x



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# Automobile Sales Statistics Dashboard

Select Statistics:

Yearly Statistics



2023



## Yearly Automobile Sales

theia@theia-dhanuvarsha9: /home/project

> theia@theia-dhanuvarsha9: /home/project x



\* Debug mode: on

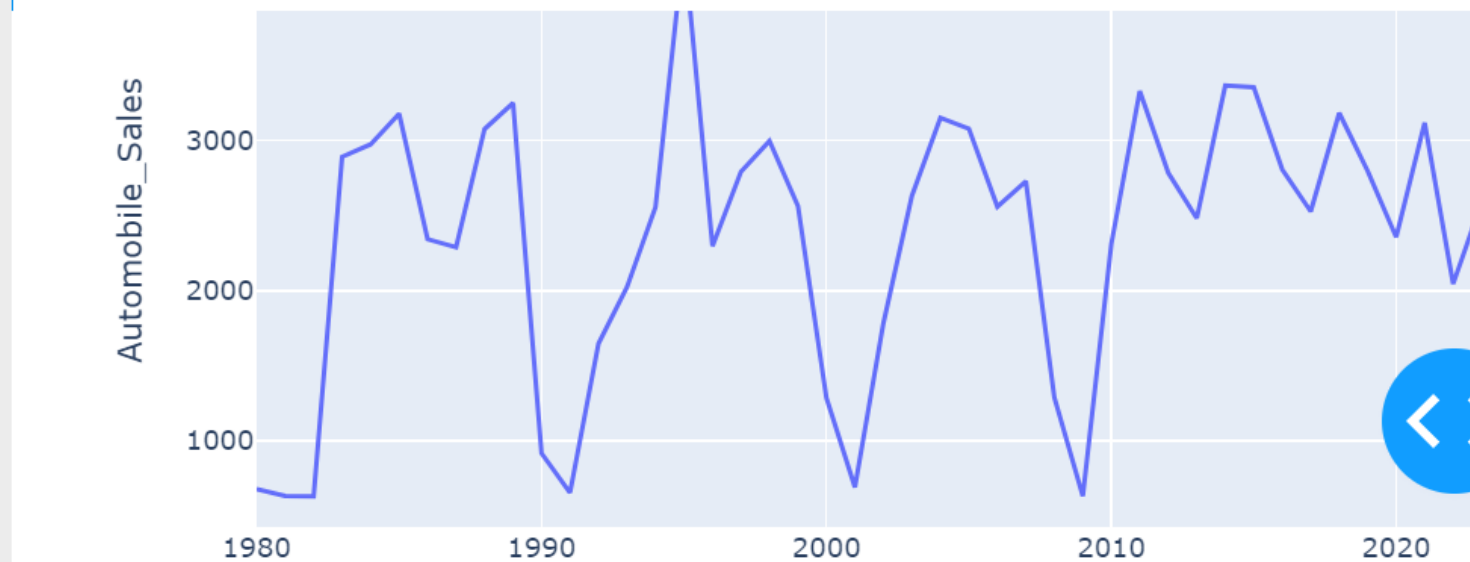
Address already in use

Port 8050 is in use by another program. Either identify and stop that program, or start the server with a different port.

theia@theia-dhanuvarsha9: /home/project\$









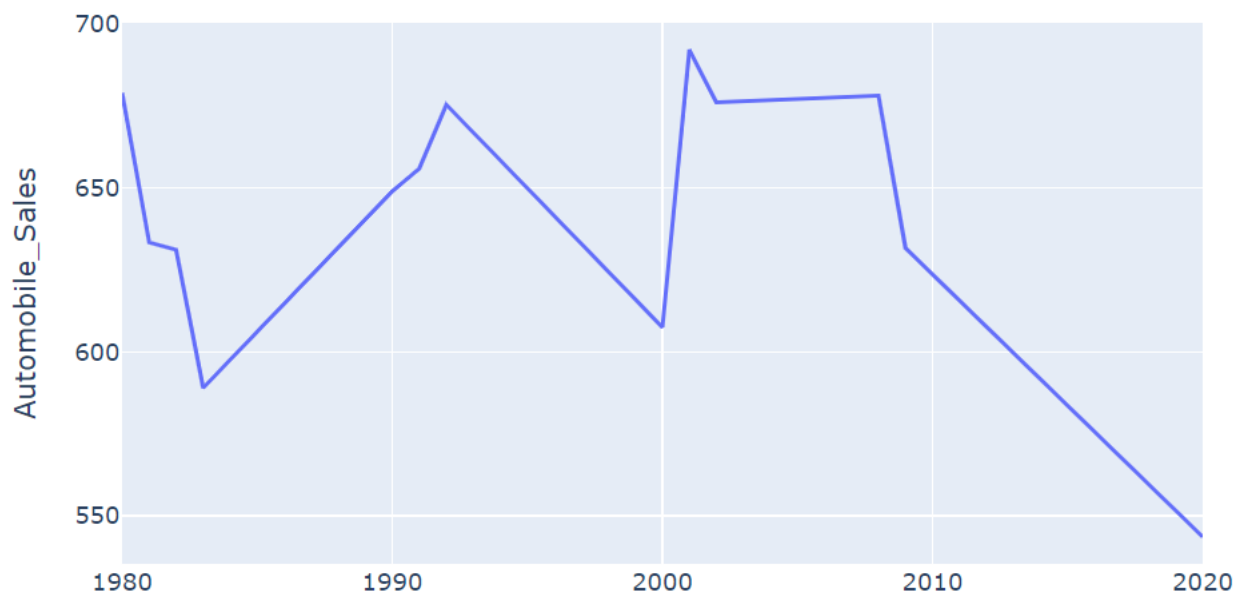
Select Statistics:

Recession Period Statistics

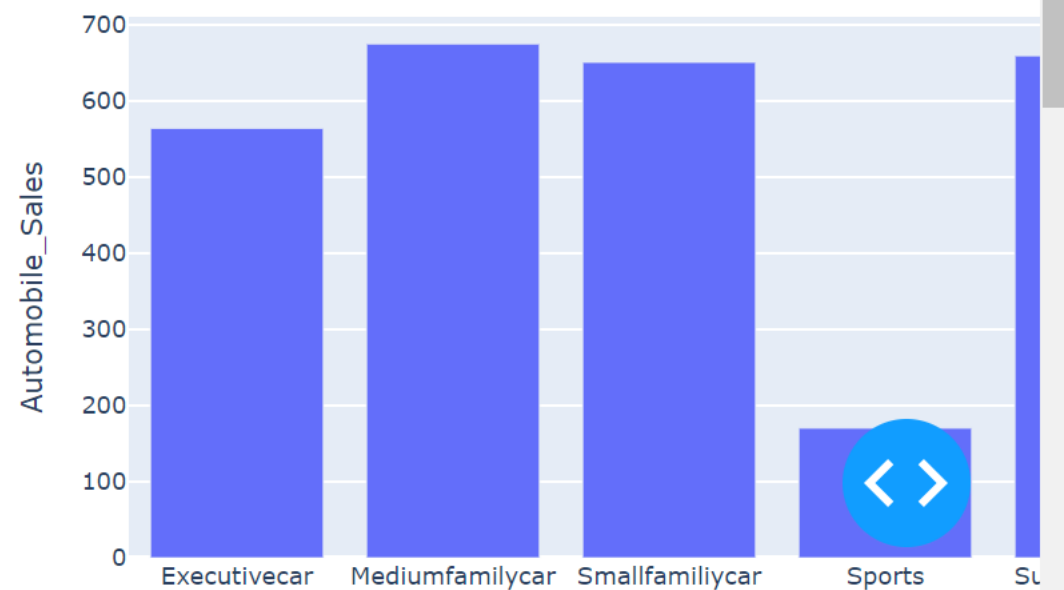


2023

Average Automobile Sales fluctuation over Recession Period

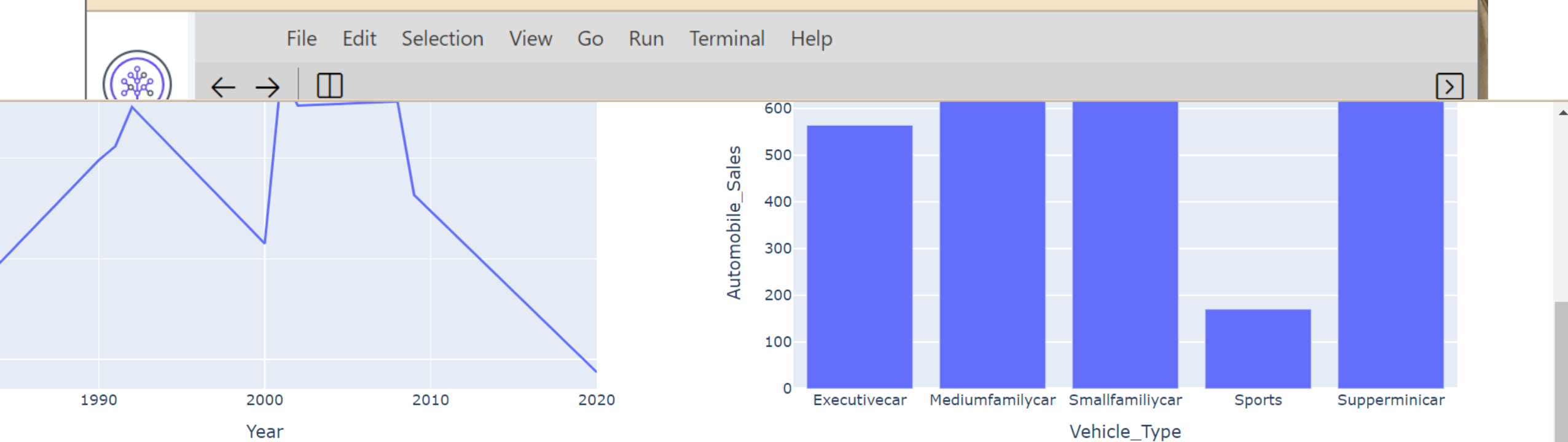


Average Vehicles Sold by Vehicle Type

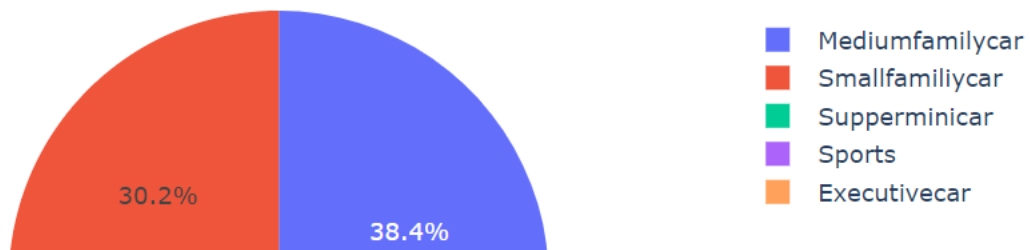


are the server with a different port.

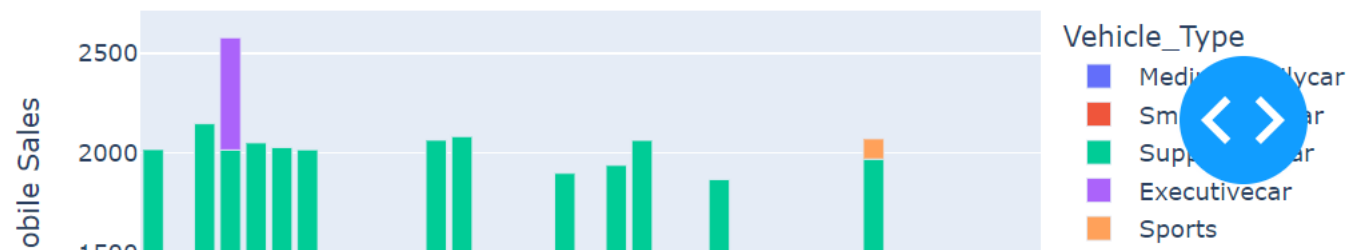
theia@theia-dhanuvarsha9: /home/project\$

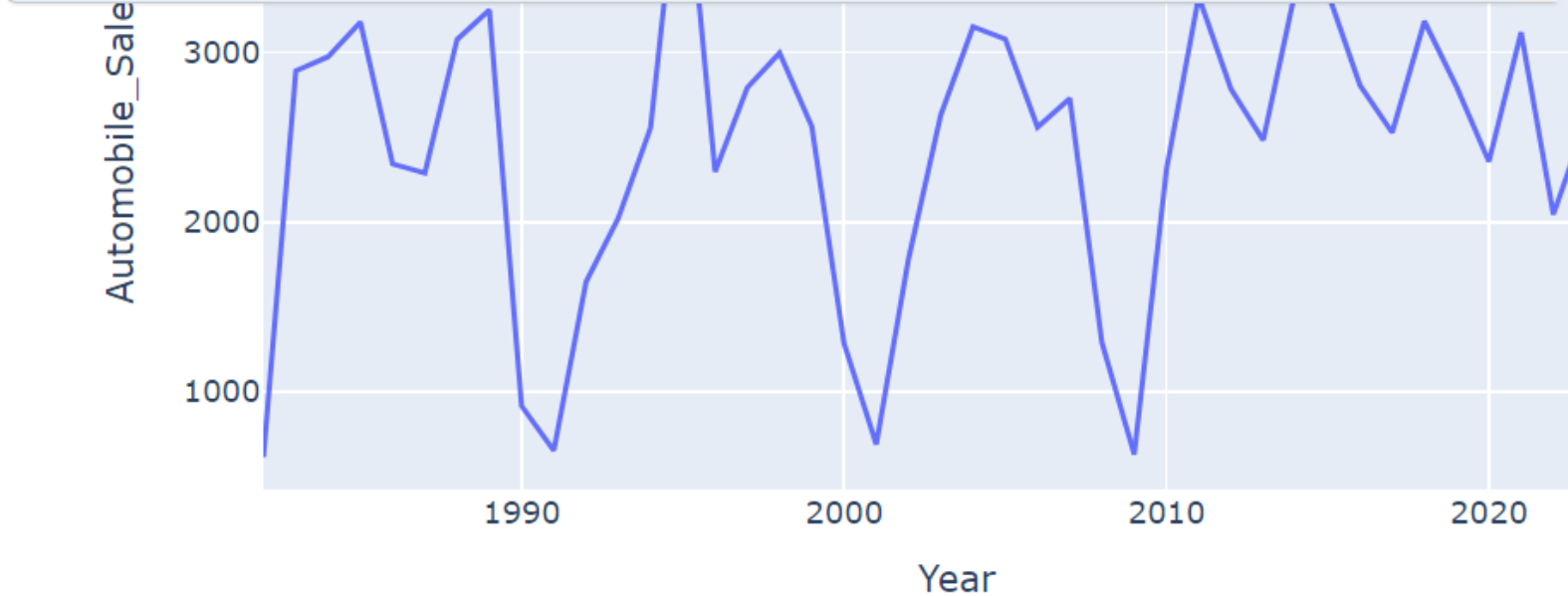
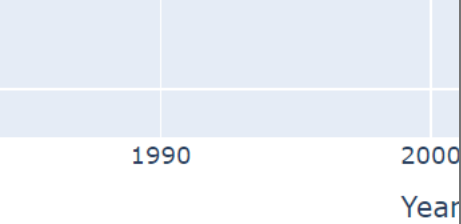
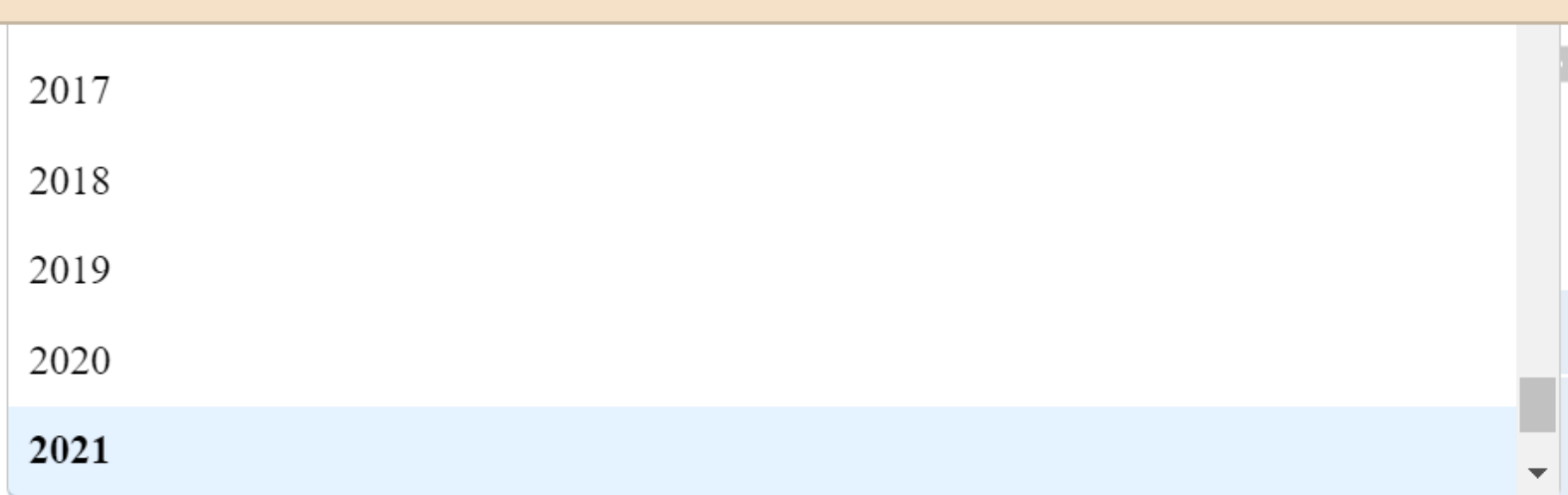


Expenditure Share by Vehicle Type

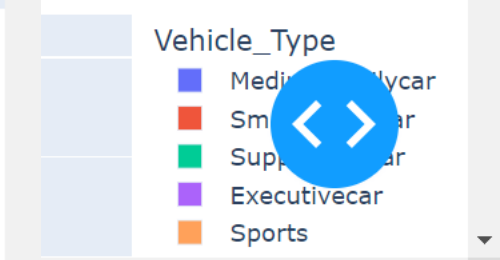
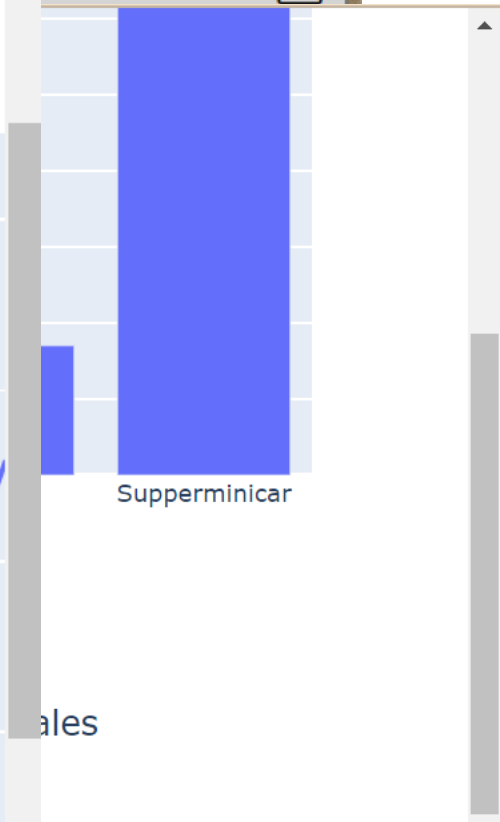
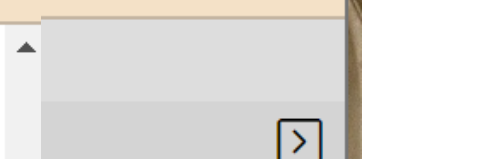
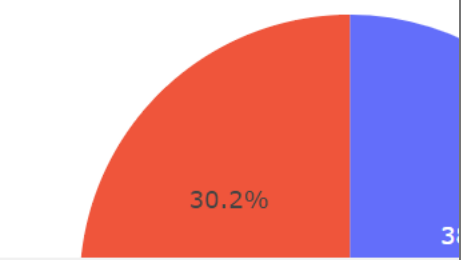


Effect of Unemployment Rate on Vehicle Type and Sales





Expenditure Share by Vehi



Average Vehicles Sold by Vehicle Type in 2021