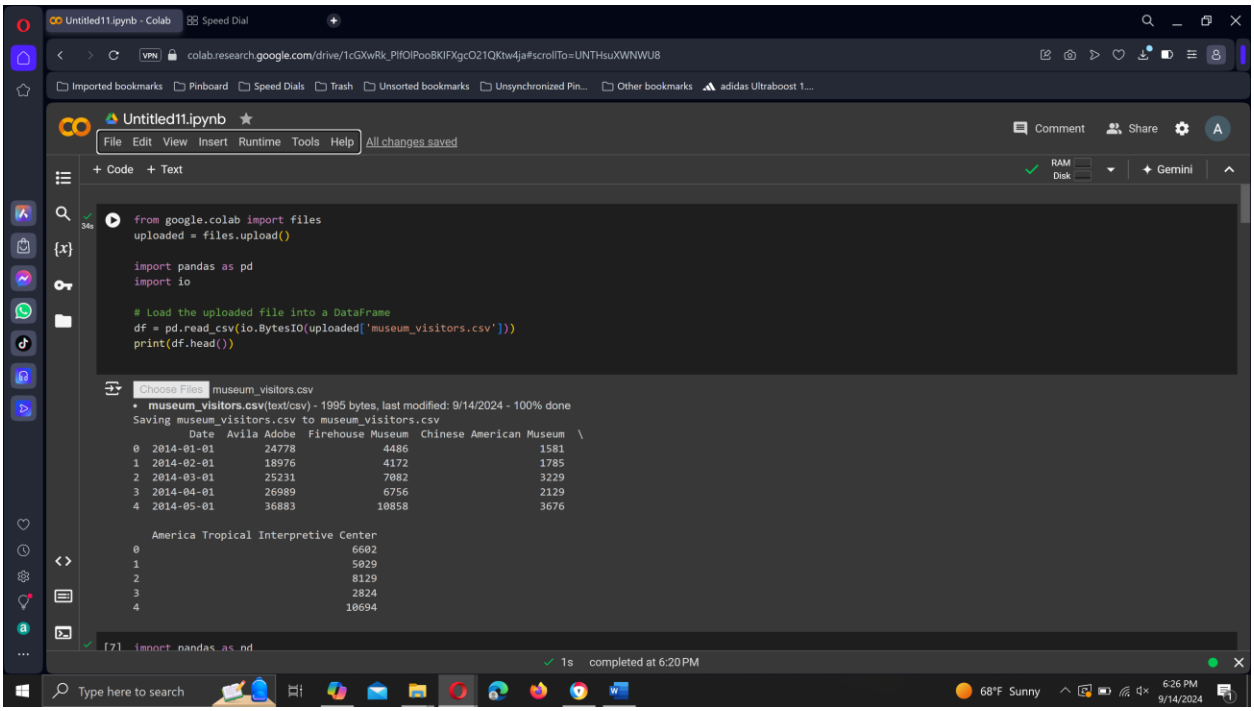
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Gemini
from google.colab import files
uploaded = files.upload()
import pandas as pd
import io
# Load the uploaded file into a DataFrame
df = pd.read_csv(io.BytesIO(uploaded['museum_visitors.csv']))
print(df.head())
Choose Files museum_visitors.csv
museum_visitors.csv(text/csv) - 1995 bytes, last modified: 9/14/2024 - 100% done
Saving museum_visitors.csv to museum_visitors.csv
Date Avila Adobe Firehouse Museum Chinese American Museum \
0 2014-01-01 24778 4486 1581
1 2014-02-01 18976 4172 1785
2 2014-03-01 25231 7082 3229
3 2014-04-01 26989 6756 2129
4 2014-05-01 36883 10858 3676
America Tropical Interpretive Center
0 6602
1 5029
2 8129
3 2824
4 10694
[7] import pandas as pd
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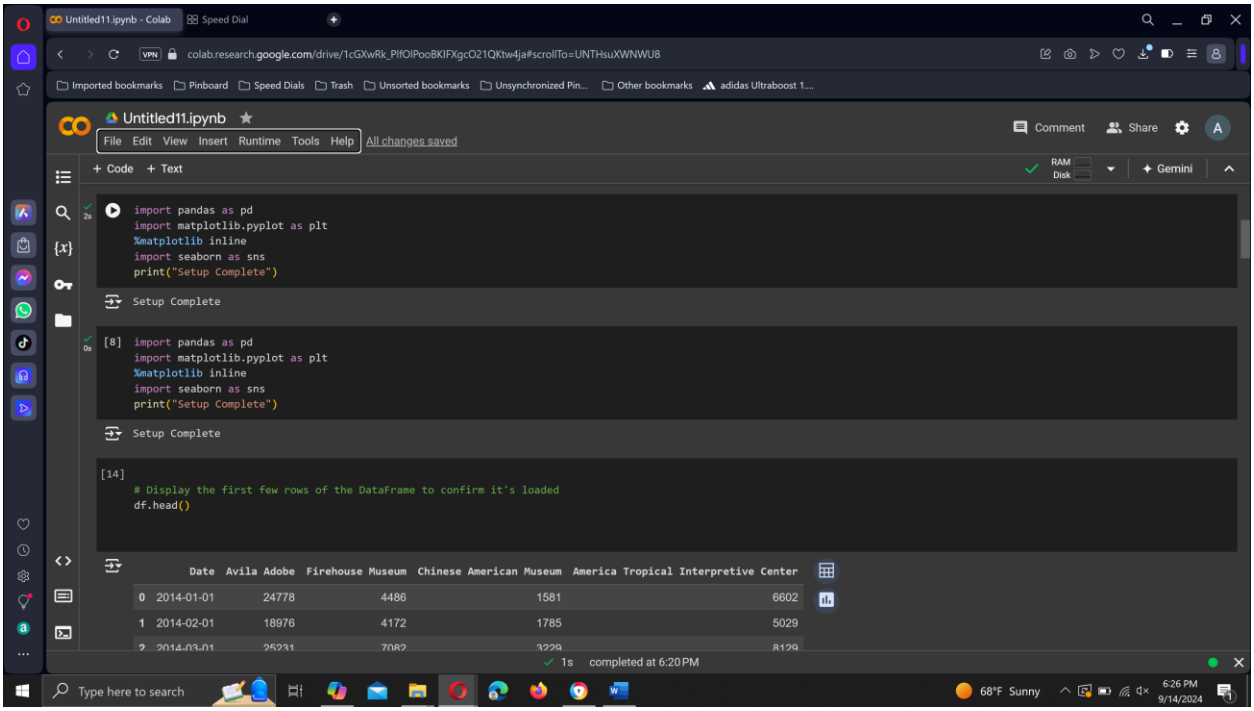
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Gemini
import pandas as pd
import matplotlib.pyplot as plt
%matplotlib inline
import seaborn as sns
print("Setup Complete")
Setup Complete
[8] import pandas as pd
import matplotlib.pyplot as plt
%matplotlib inline
import seaborn as sns
print("Setup Complete")
Setup Complete
[14] # Display the first few rows of the DataFrame to confirm it's loaded
df.head()
Date Avila Adobe Firehouse Museum Chinese American Museum America Tropical Interpretive Center
0 2014-01-01 24778 4486 1581 6602
1 2014-02-01 18976 4172 1785 5029
2 2014-03-01 25231 7082 3229 8129
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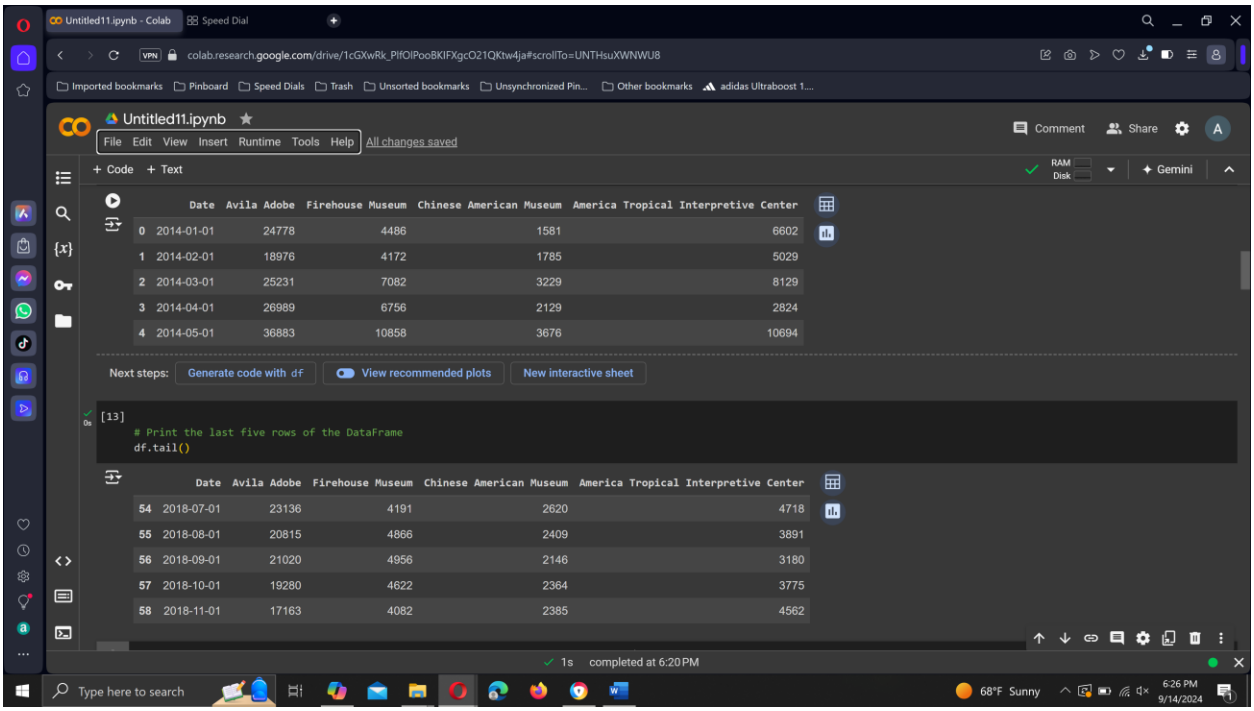
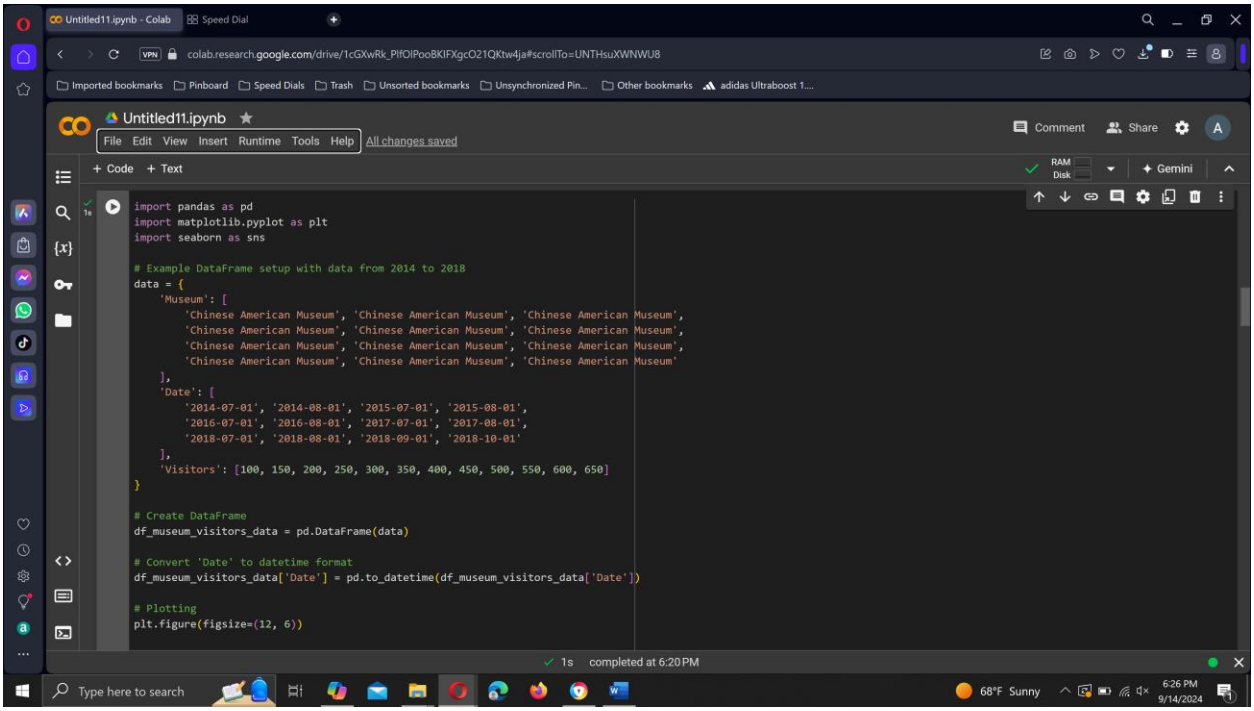
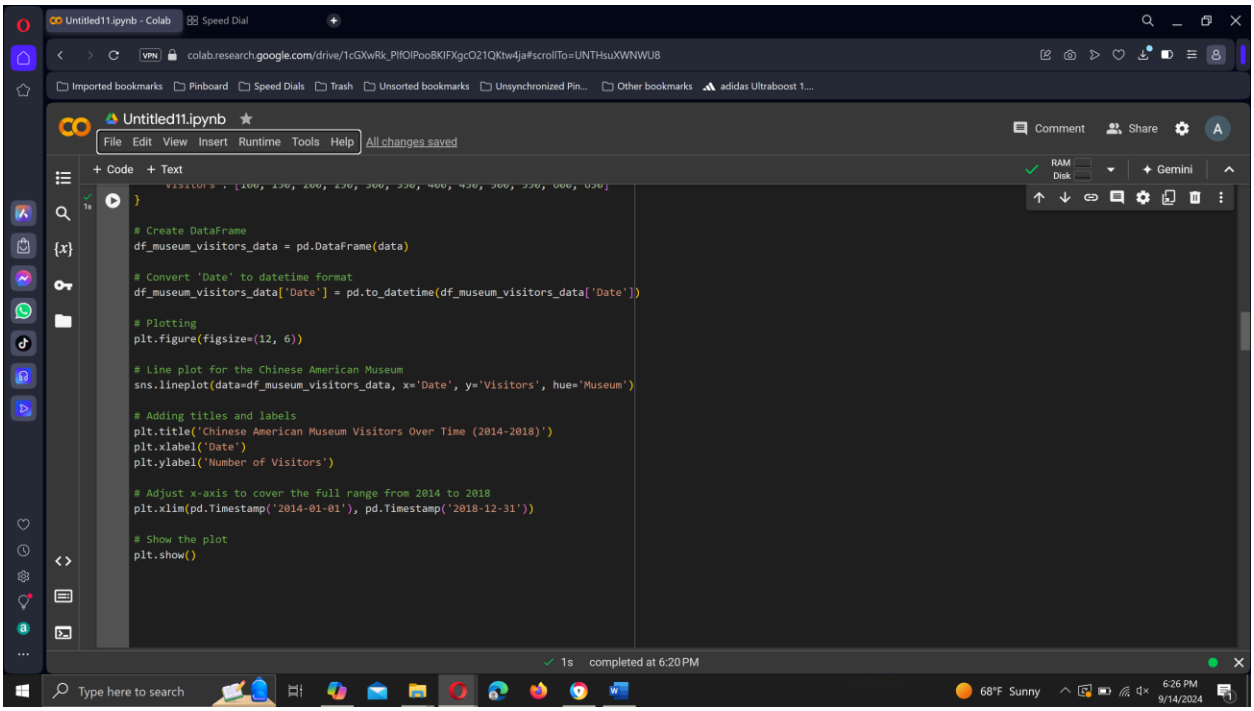


	Date	Avila Adobe	Firehouse Museum	Chinese American Museum	America Tropical Interpretive Center
0	2014-01-01	24778	4486	1581	6602
1	2014-02-01	18976	4172	1785	5029
2	2014-03-01	25231	7082	3229	8129
3	2014-04-01	26989	6756	2129	2824
4	2014-05-01	36883	10858	3676	10694

	Date	Avila Adobe	Firehouse Museum	Chinese American Museum	America Tropical Interpretive Center
54	2018-07-01	23136	4191	2620	4718
55	2018-08-01	20815	4866	2409	3891
56	2018-09-01	21020	4956	2146	3180
57	2018-10-01	19280	4622	2364	3775
58	2018-11-01	17163	4082	2385	4562

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}
# Create DataFrame
df_museum_visitors_data = pd.DataFrame(data)
# Convert 'Date' to datetime format
df_museum_visitors_data['Date'] = pd.to_datetime(df_museum_visitors_data['Date'])
# Plotting
plt.figure(figsize=(12, 6))
# Line plot for the Chinese American Museum
sns.lineplot(data=df_museum_visitors_data, x='Date', y='Visitors', hue='Museum')
# Adding titles and labels
plt.title('Chinese American Museum Visitors Over Time (2014-2018)')
plt.xlabel('Date')
plt.ylabel('Number of Visitors')
# Adjust x-axis to cover the full range from 2014 to 2018
plt.xlim(pd.Timestamp('2014-01-01'), pd.Timestamp('2018-12-31'))
# Show the plot
plt.show()
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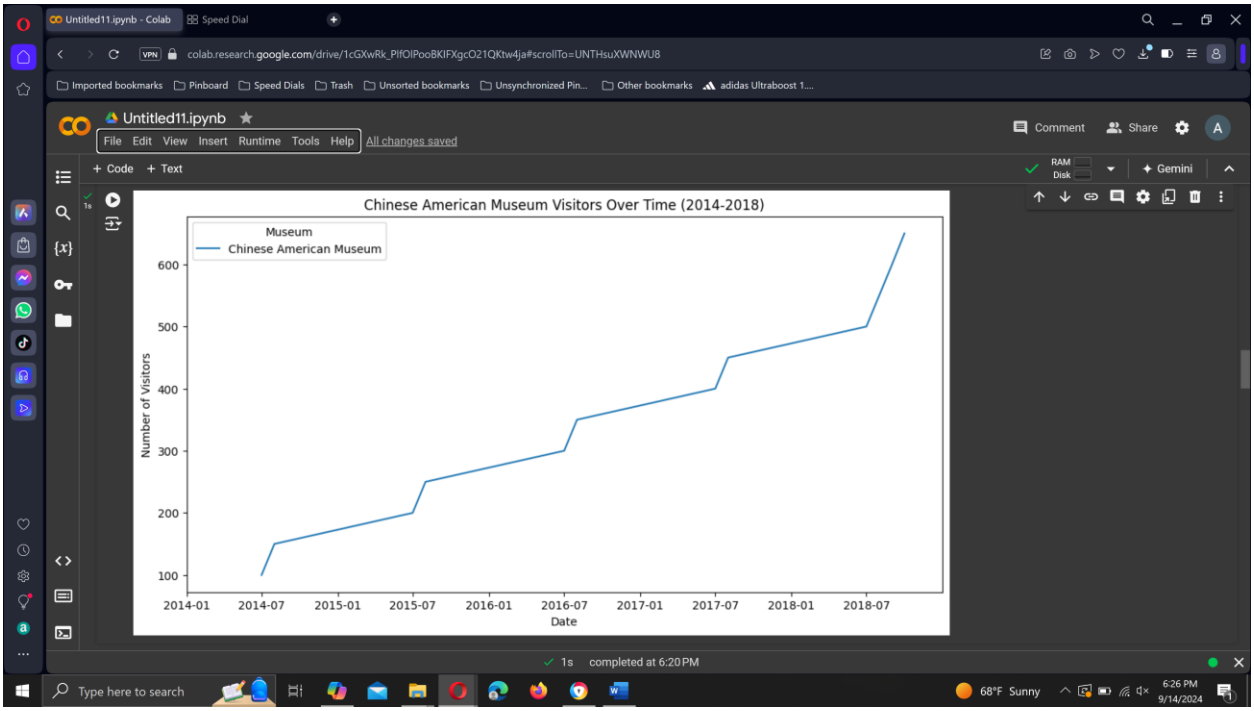
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Chinese American Museum Visitors Over Time (2014-2018)
Museum
Chinese American Museum
Number of Visitors
100
200
300
400
500
600
2014-01
2014-07
2015-01
2015-07
2016-01
2016-07
2017-01
2017-07
2018-01
2018-07
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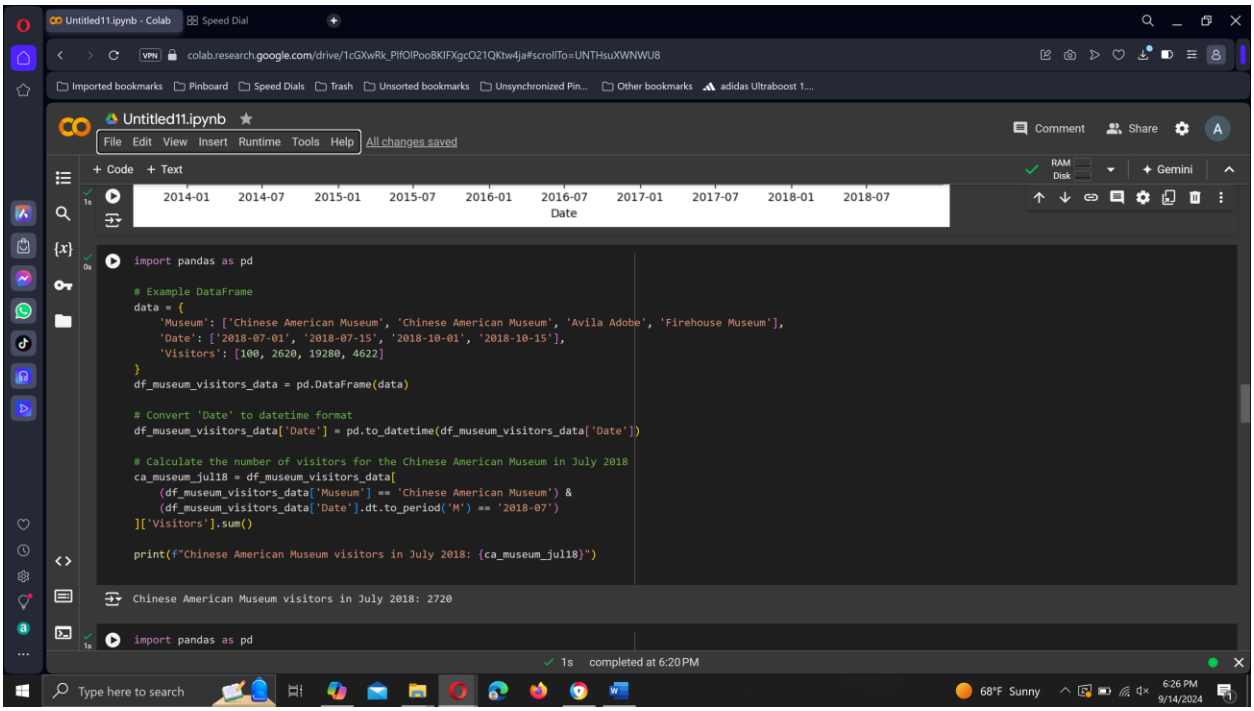
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2014-01
2014-07
2015-01
2015-07
2016-01
2016-07
2017-01
2017-07
2018-01
2018-07
Date
import pandas as pd
# Example DataFrame
data = {
'Museum': ['Chinese American Museum', 'Chinese American Museum', 'Avila Adobe', 'Firehouse Museum'],
'Date': ['2018-07-01', '2018-07-15', '2018-10-01', '2018-10-15'],
'Visitors': [100, 2620, 19280, 4622]
}
df_museum_visitors_data = pd.DataFrame(data)
# Convert 'Date' to datetime format
df_museum_visitors_data['Date'] = pd.to_datetime(df_museum_visitors_data['Date'])
# Calculate the number of visitors for the Chinese American Museum in July 2018
ca_museum_jul18 = df_museum_visitors_data[
(df_museum_visitors_data['Museum'] == 'Chinese American Museum') &
(df_museum_visitors_data['Date'].dt.to_period('M') == '2018-07')
]['Visitors'].sum()
print(f"Chinese American Museum visitors in July 2018: {ca_museum_jul18}")
Chinese American Museum visitors in July 2018: 2720
import pandas as pd
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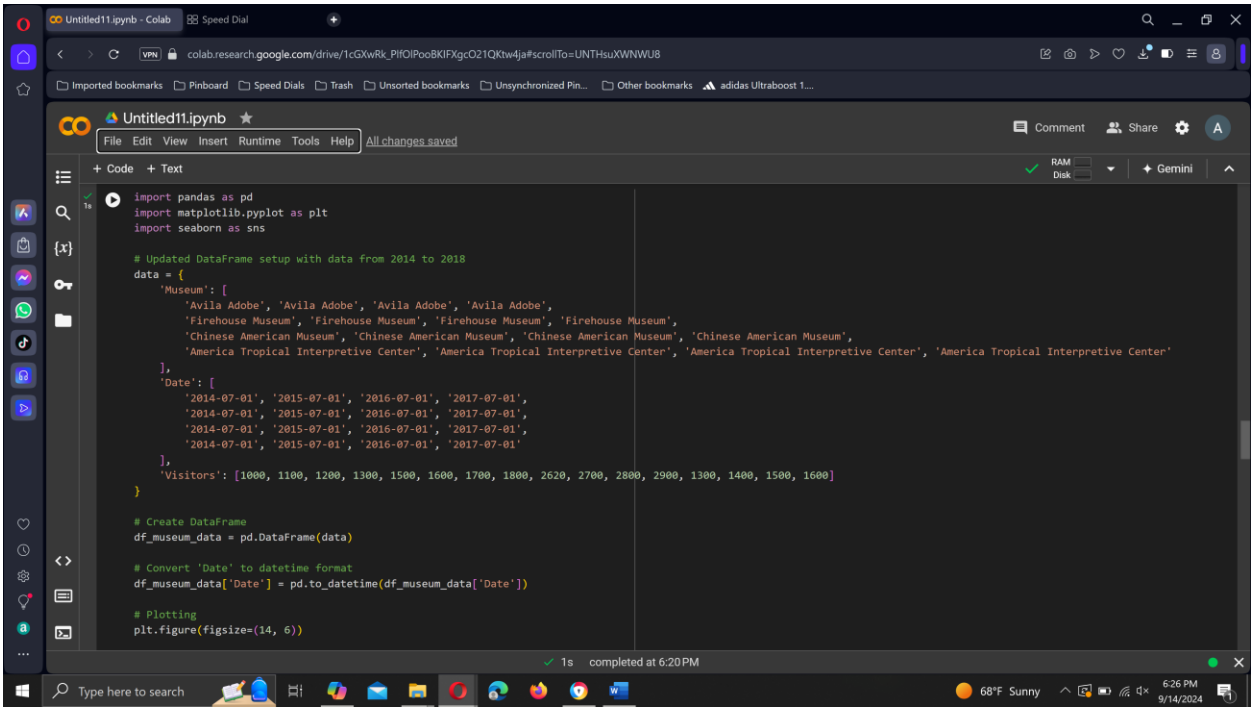
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import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
# Updated DataFrame setup with data from 2014 to 2018
data = {
'Museum': [
'Avila Adobe', 'Avila Adobe', 'Avila Adobe', 'Avila Adobe',
'Firehouse Museum', 'Firehouse Museum', 'Firehouse Museum', 'Firehouse Museum',
'Chinese American Museum', 'Chinese American Museum', 'Chinese American Museum', 'Chinese American Museum',
'America Tropical Interpretive Center', 'America Tropical Interpretive Center', 'America Tropical Interpretive Center', 'America Tropical Interpretive Center'
],
'Date': [
'2014-07-01', '2015-07-01', '2016-07-01', '2017-07-01',
'2014-07-01', '2015-07-01', '2016-07-01', '2017-07-01',
'2014-07-01', '2015-07-01', '2016-07-01', '2017-07-01',
'2014-07-01', '2015-07-01', '2016-07-01', '2017-07-01'
],
'Visitors': [1000, 1100, 1200, 1300, 1500, 1600, 1700, 1800, 2620, 2700, 2800, 2900, 1300, 1400, 1500, 1600]
}
# Create DataFrame
df_museum_data = pd.DataFrame(data)
# Convert 'Date' to datetime format
df_museum_data['Date'] = pd.to_datetime(df_museum_data['Date'])
# Plotting
plt.figure(figsize=(14, 6))
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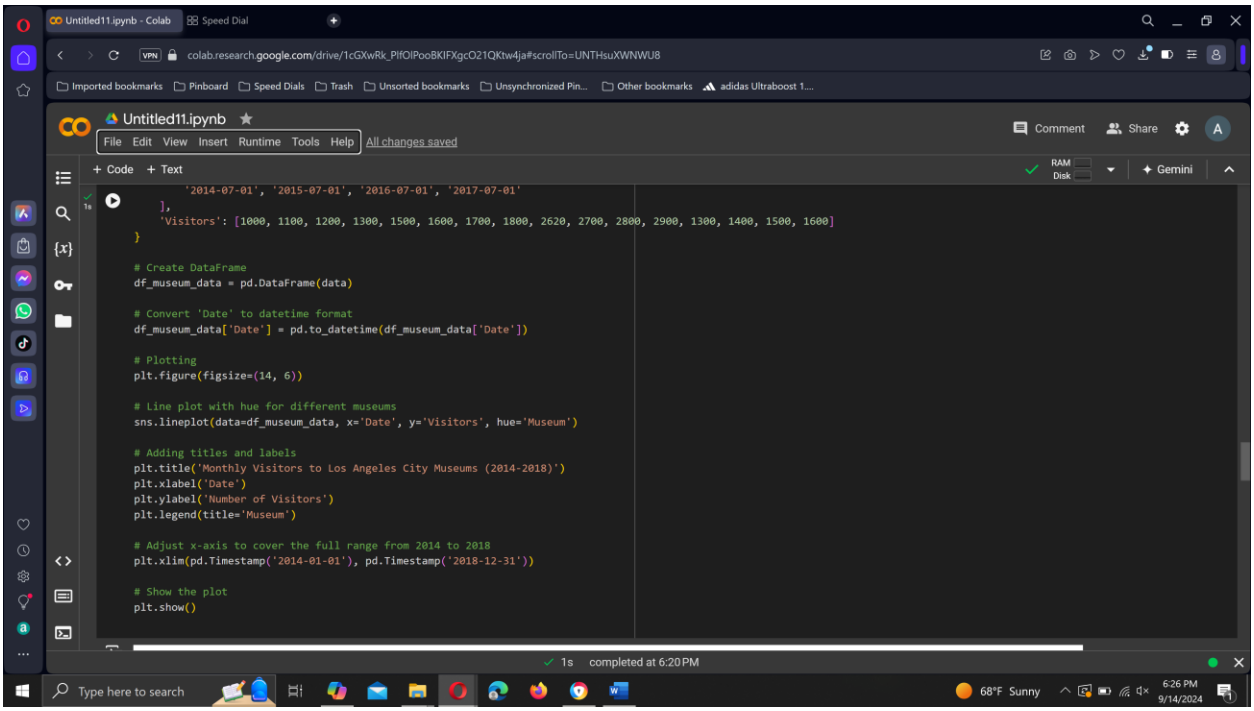
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'2014-07-01', '2015-07-01', '2016-07-01', '2017-07-01'
],
'Visitors': [1000, 1100, 1200, 1300, 1500, 1600, 1700, 1800, 2620, 2700, 2800, 2900, 1300, 1400, 1500, 1600]
}
# Create DataFrame
df_museum_data = pd.DataFrame(data)
# Convert 'Date' to datetime format
df_museum_data['Date'] = pd.to_datetime(df_museum_data['Date'])
# Plotting
plt.figure(figsize=(14, 6))
# Line plot with hue for different museums
sns.lineplot(data=df_museum_data, x='Date', y='Visitors', hue='Museum')
# Adding titles and labels
plt.title('Monthly Visitors to Los Angeles City Museums (2014-2018)')
plt.xlabel('Date')
plt.ylabel('Number of Visitors')
plt.legend(title='Museum')
# Adjust x-axis to cover the full range from 2014 to 2018
plt.xlim(pd.Timestamp('2014-01-01'), pd.Timestamp('2018-12-31'))
# Show the plot
plt.show()
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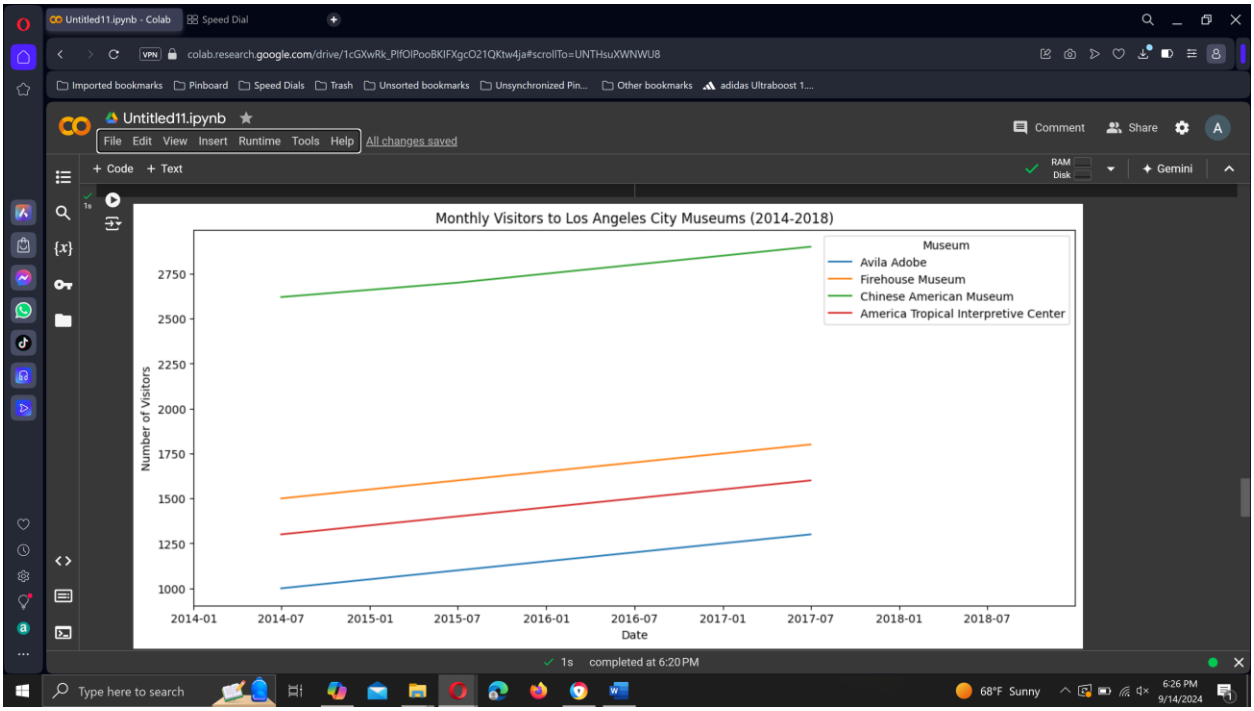
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Monthly Visitors to Los Angeles City Museums (2014-2018)
Museum
Avila Adobe
Firehouse Museum
Chinese American Museum
America Tropical Interpretive Center
Number of Visitors
2750
2500
2250
2000
1750
1500
1250
1000
2014-01
2014-07
2015-01
2015-07
2016-01
2016-07
2017-01
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2018-01
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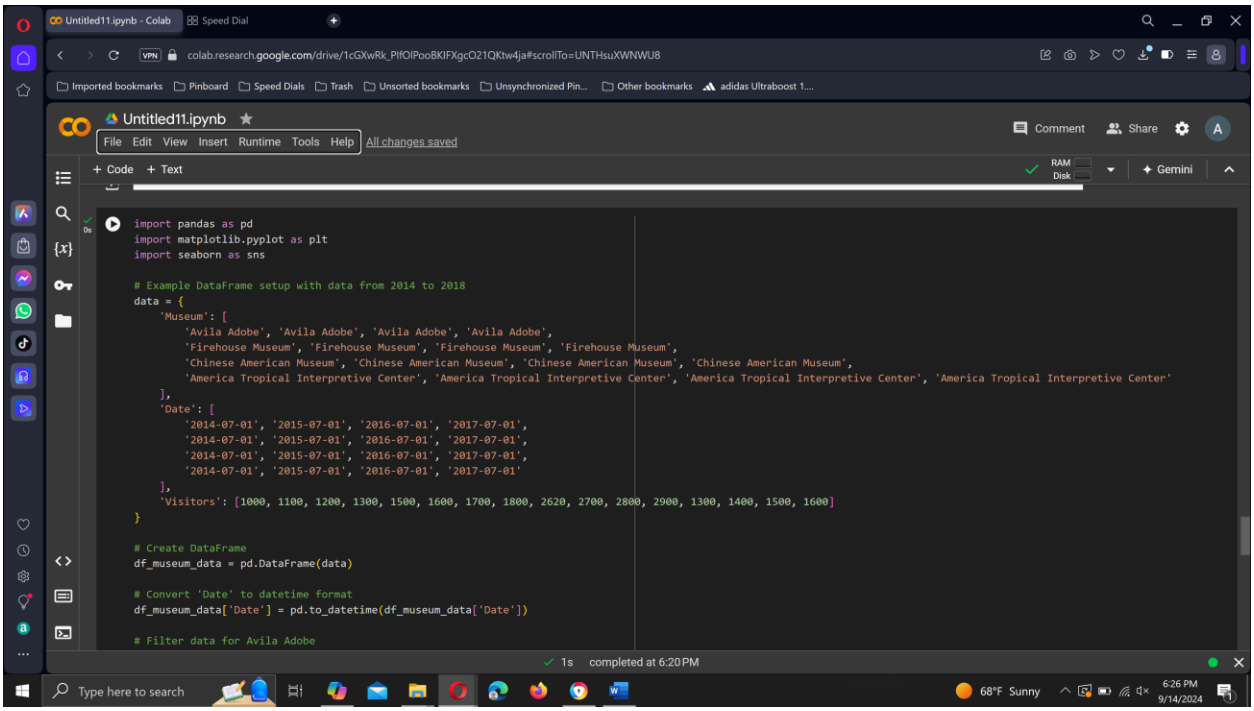
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Gemini
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
# Example DataFrame setup with data from 2014 to 2018
data = {
'Museum': [
'Avila Adobe', 'Avila Adobe', 'Avila Adobe', 'Avila Adobe',
'Firehouse Museum', 'Firehouse Museum', 'Firehouse Museum', 'Firehouse Museum',
'Chinese American Museum', 'Chinese American Museum', 'Chinese American Museum', 'Chinese American Museum',
'America Tropical Interpretive Center', 'America Tropical Interpretive Center', 'America Tropical Interpretive Center', 'America Tropical Interpretive Center'
],
'Date': [
'2014-07-01', '2015-07-01', '2016-07-01', '2017-07-01',
'2014-07-01', '2015-07-01', '2016-07-01', '2017-07-01',
'2014-07-01', '2015-07-01', '2016-07-01', '2017-07-01',
'2014-07-01', '2015-07-01', '2016-07-01', '2017-07-01'
],
'Visitors': [1000, 1100, 1200, 1300, 1500, 1600, 1700, 1800, 2620, 2700, 2800, 2900, 1300, 1400, 1500, 1600]
}
# Create DataFrame
df_museum_data = pd.DataFrame(data)
# Convert 'Date' to datetime format
df_museum_data['Date'] = pd.to_datetime(df_museum_data['Date'])
Filter data for Avila Adobe
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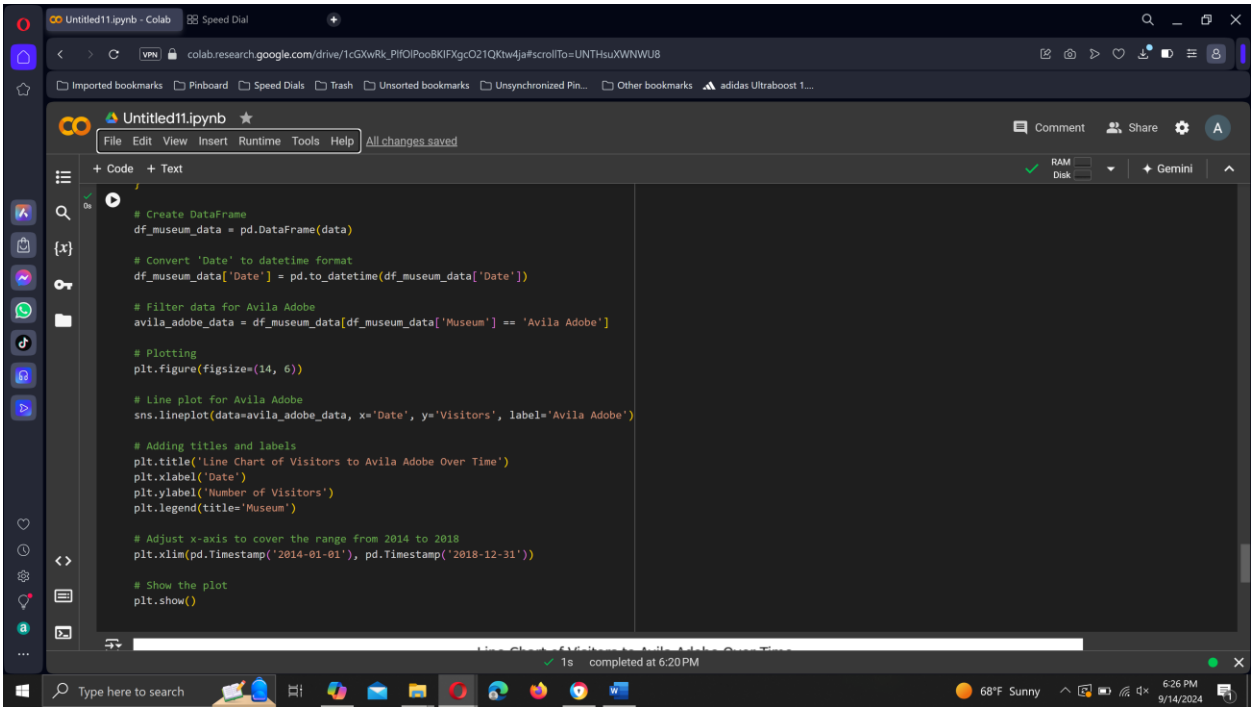
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# Create DataFrame
df_museum_data = pd.DataFrame(data)
# Convert 'Date' to datetime format
df_museum_data['Date'] = pd.to_datetime(df_museum_data['Date'])
# Filter data for Avila Adobe
avila_adobe_data = df_museum_data[df_museum_data['Museum'] == 'Avila Adobe']
# Plotting
plt.figure(figsize=(14, 6))
# Line plot for Avila Adobe
sns.lineplot(data=avila_adobe_data, x='Date', y='Visitors', label='Avila Adobe')
# Adding titles and labels
plt.title('Line Chart of Visitors to Avila Adobe Over Time')
plt.xlabel('Date')
plt.ylabel('Number of Visitors')
plt.legend(title='Museum')
# Adjust x-axis to cover the range from 2014 to 2018
plt.xlim(pd.Timestamp('2014-01-01'), pd.Timestamp('2018-12-31'))
# Show the plot
plt.show()
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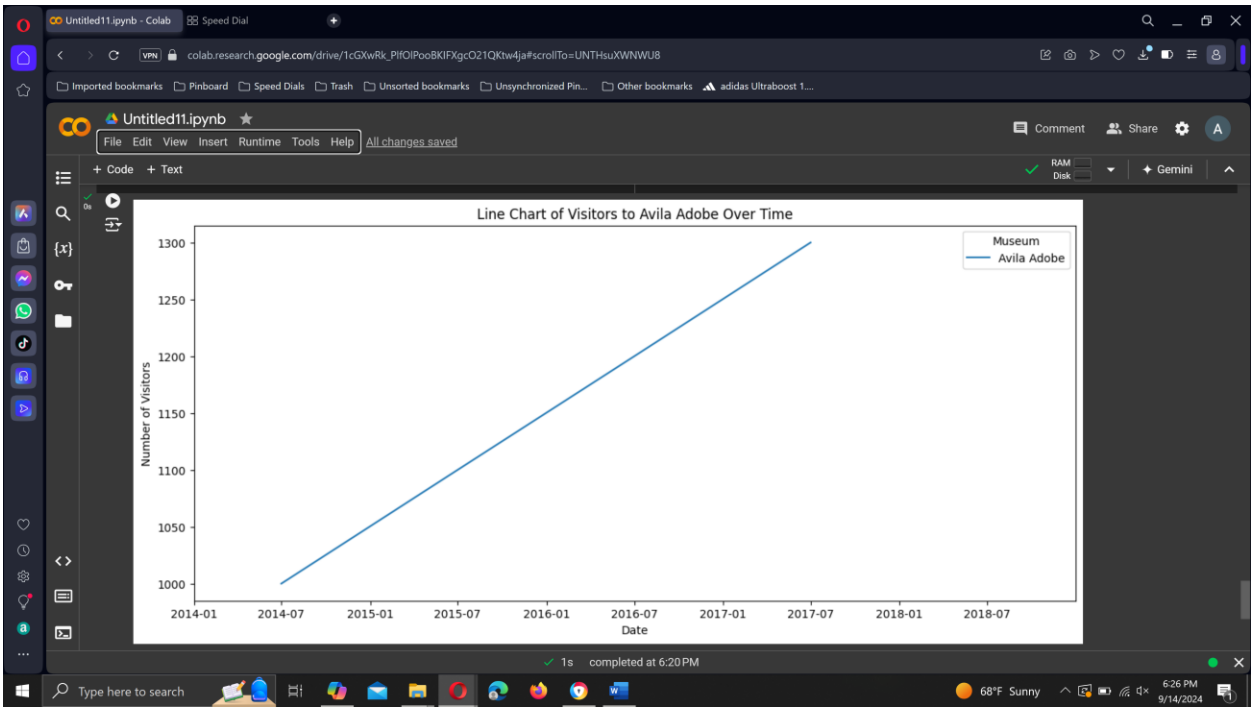
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Line Chart of Visitors to Avila Adobe Over Time
Museum
Avila Adobe
Number of Visitors
1300
1250
1200
1150
1100
1050
1000
2014-01
2014-07
2015-01
2015-07
2016-01
2016-07
2017-01
2017-07
2018-01
2018-07
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