PERSONAL PORTFOLIO

Dashboards and visualizations created using Python or MS power BI, IBM Analytics, Google Analytics

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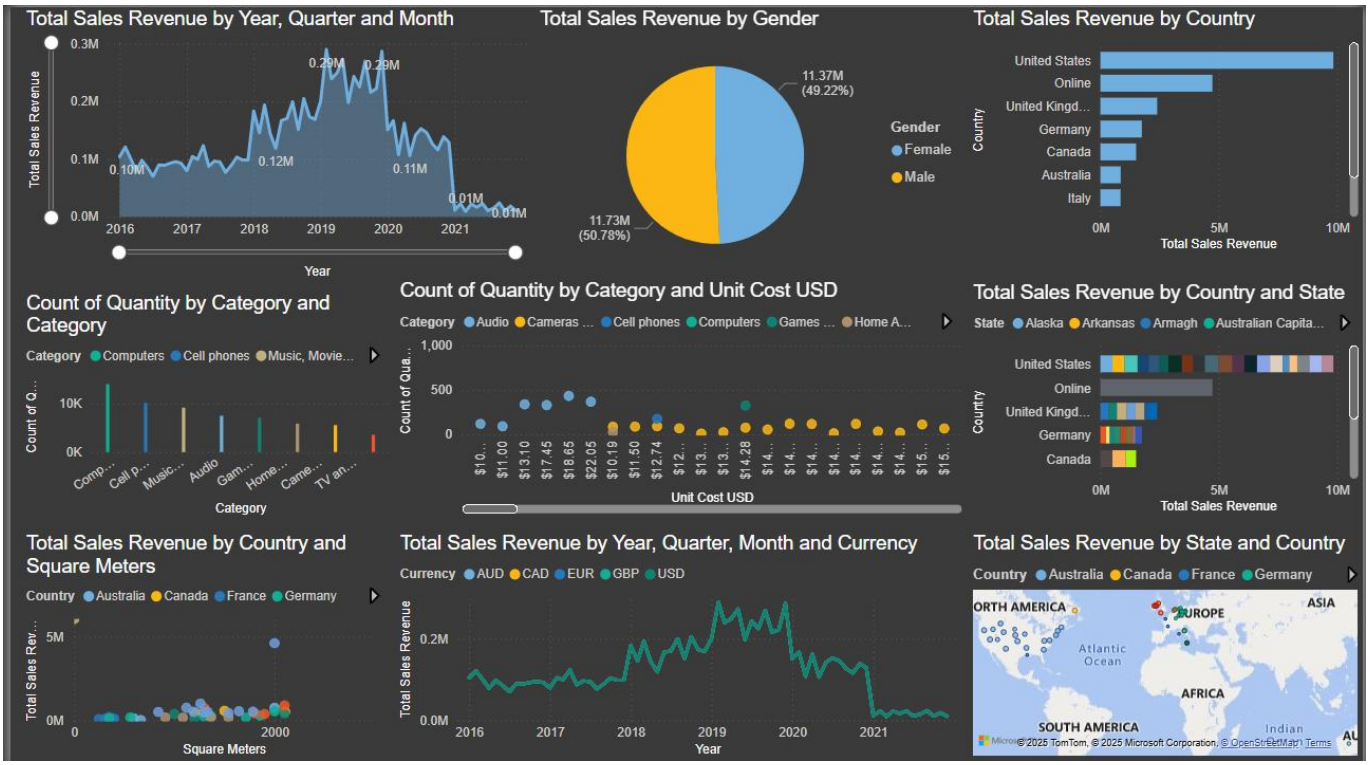
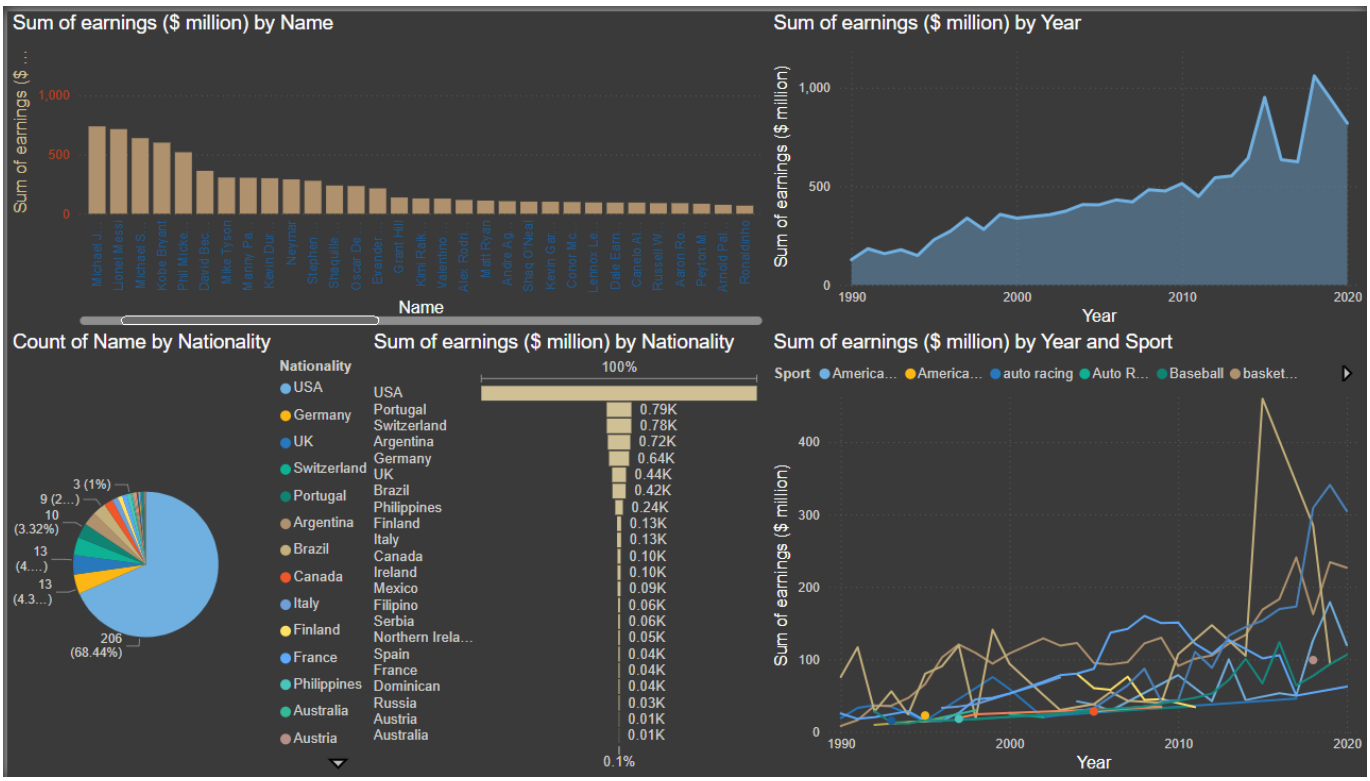
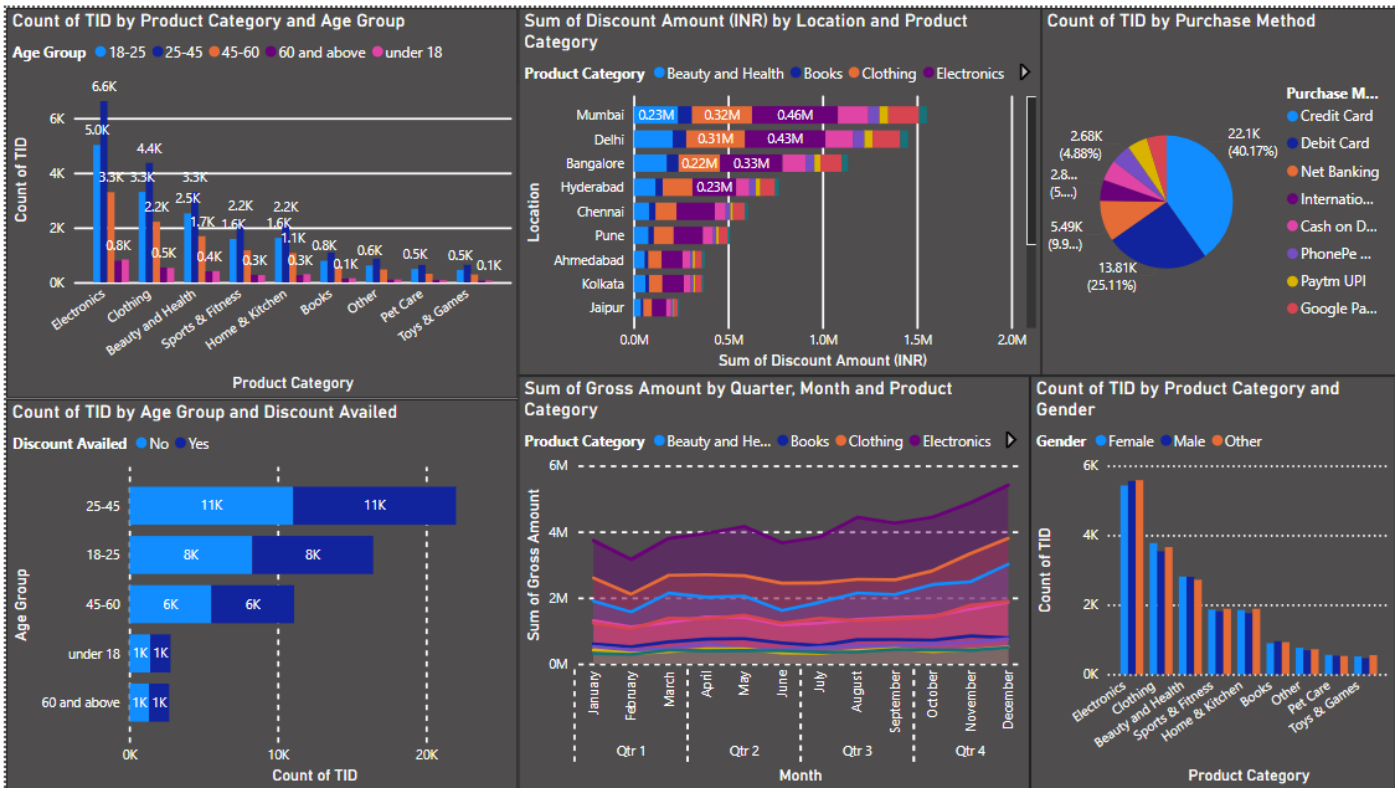
1. Global Electronics retailer: (Multiple Table Dashboard using joins and DAX script in MS Power BI)
Dataset Source:
https://mavenanalytics.io/dataplayground?dataStructure=Multiple%20tables&order=date_added%2Cdesc&page=2&pageSize=5



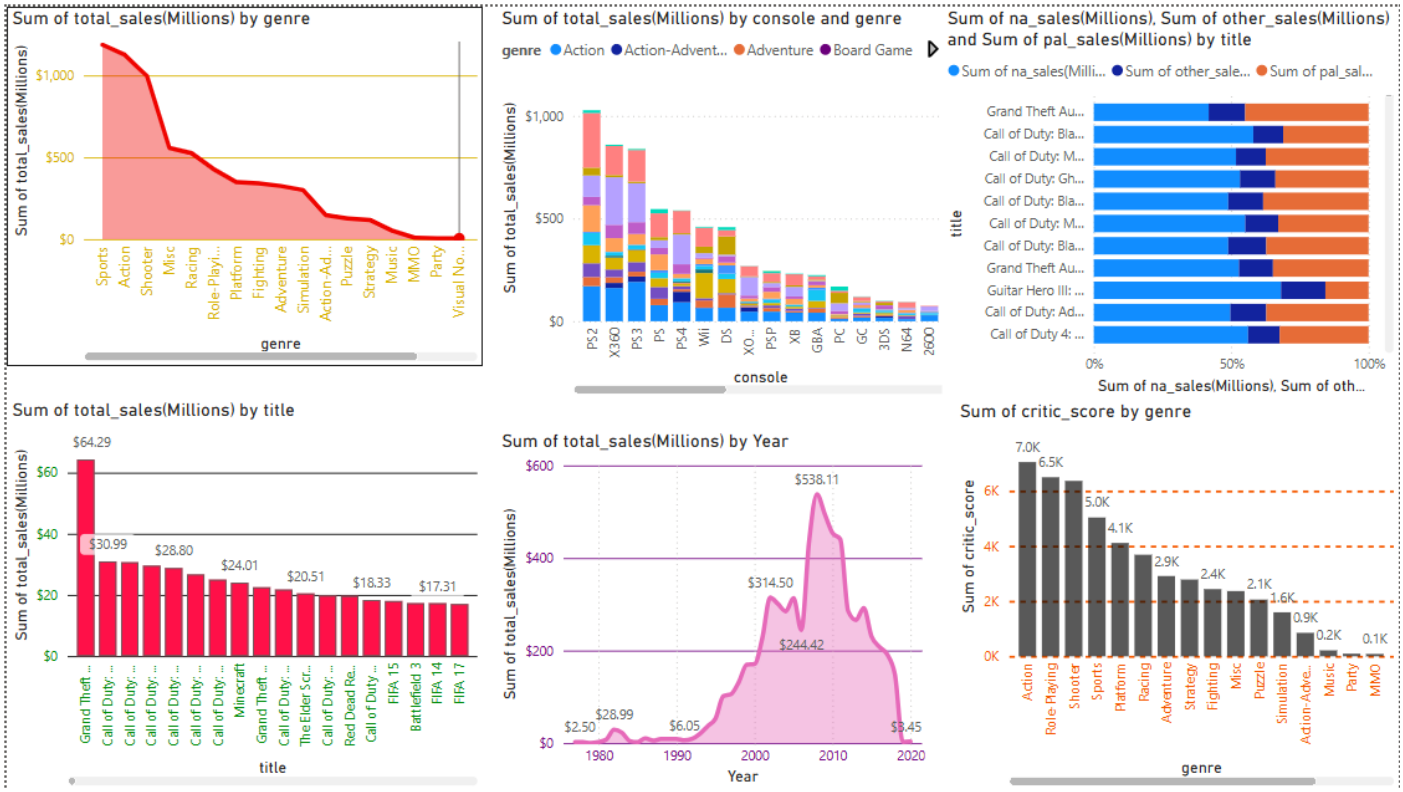
2. Forbes Highest Paid Athletes (1990-2020).
Dataset source: https://www.kaggle.com/datasets/parulpandey/forbes-highest-paid-athletes-19902019
Tool used: MS Excel, MS Power BI



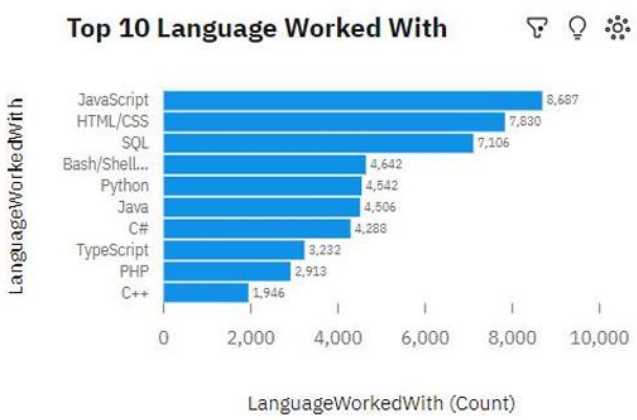
3. E-Commerce Data:
Dataset Source: https://www.kaggle.com/datasets/shrishtimanja/ecommerce-dataset-for-data-analysis
Tools Used: MS Power BI

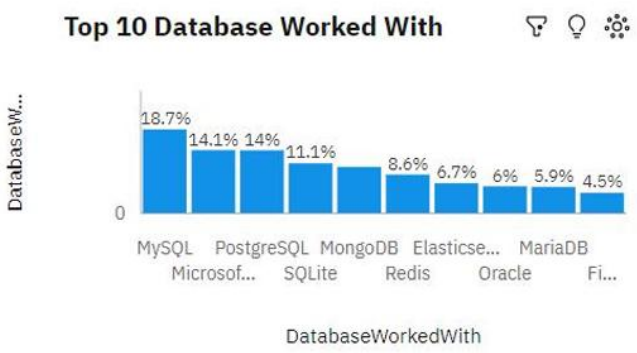


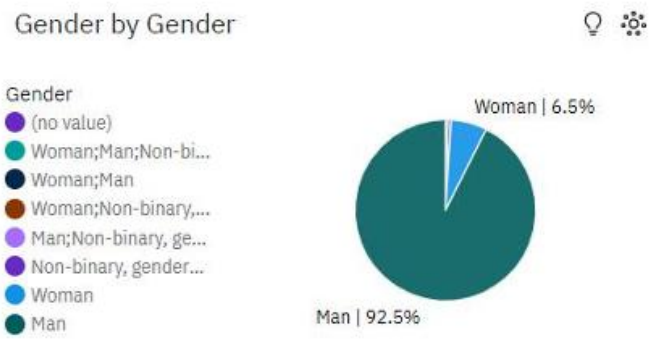
4. Video games sales.
Dataset source: https://mavenanalytics.io/dataplayground?dataStructure=Single%20table&order=date_added%2Cdesc
Tool used: MS Excel, MS Power BI

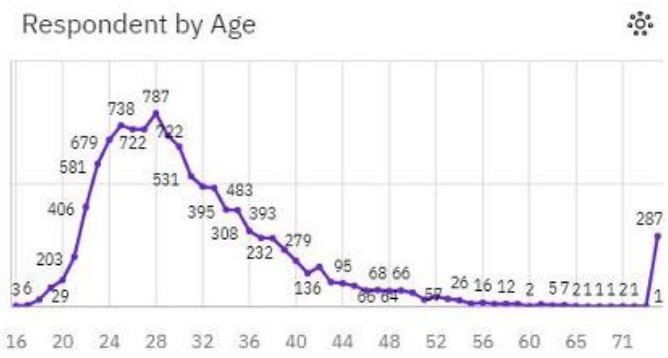


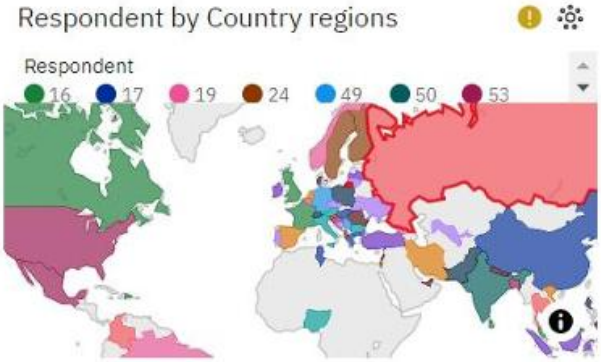
5. IBM Data Analytics course: Visualizations using Excel and IBM Cognos Analytics:

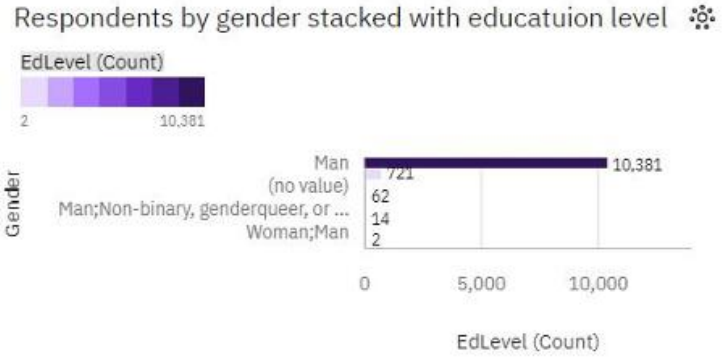








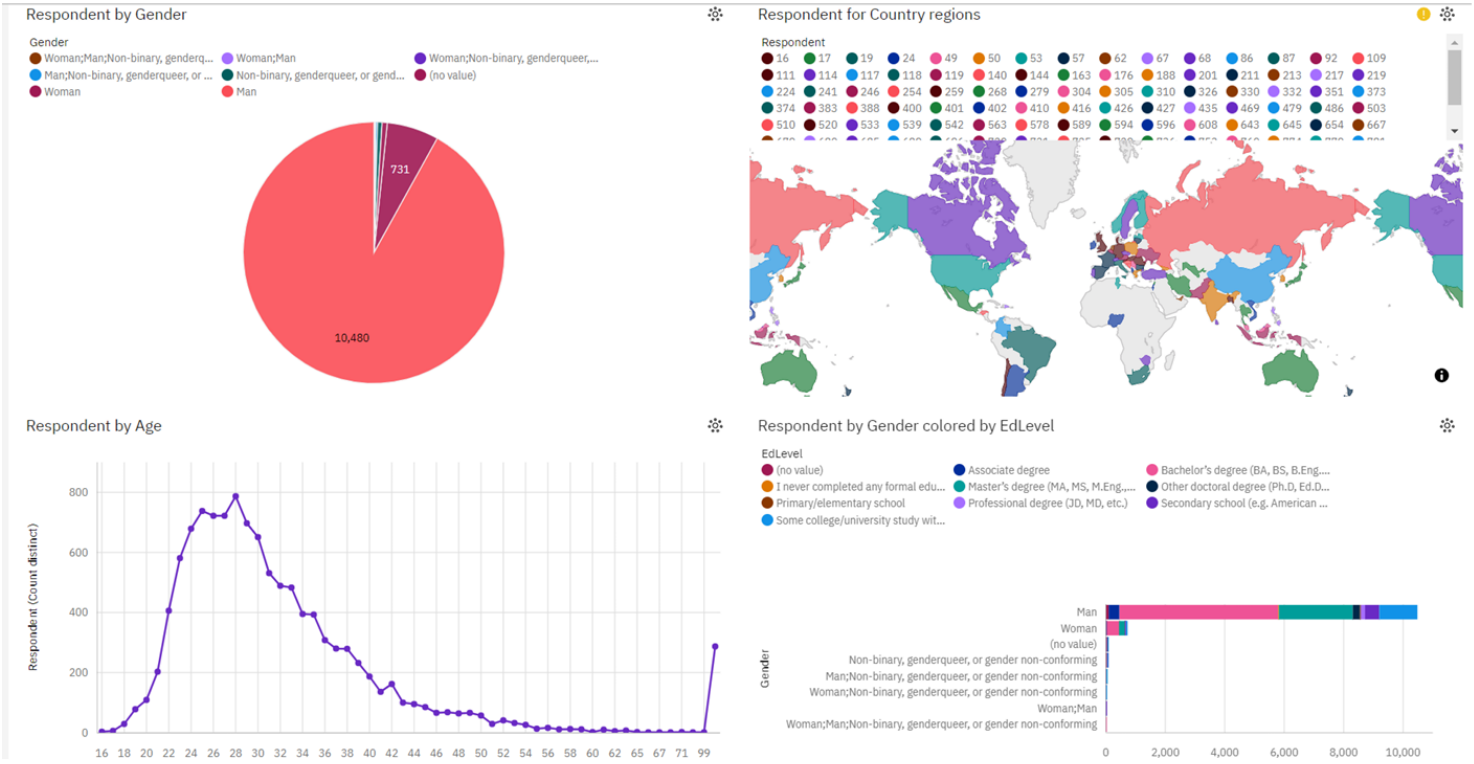




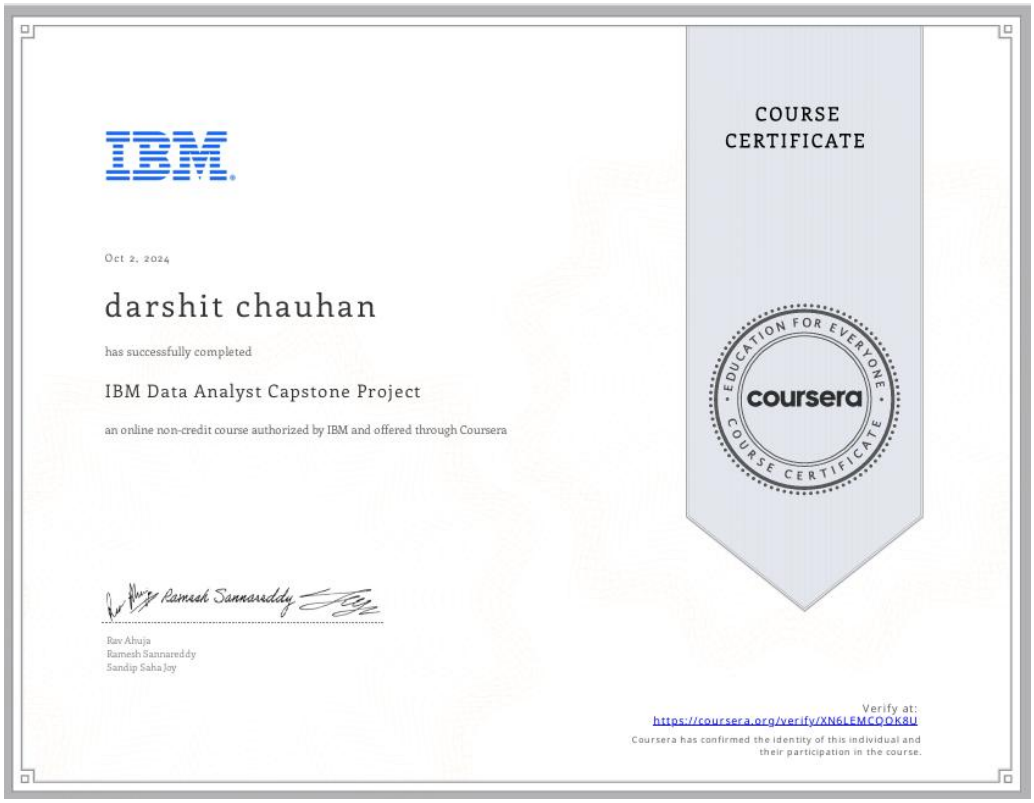
CERTIFICATION EARNED:

6. IBM Data Analytics course: CAPSTONE PROJECT.

DEMOGRAPHICS DASHBOARD:



CERTIFICATION EARNED:



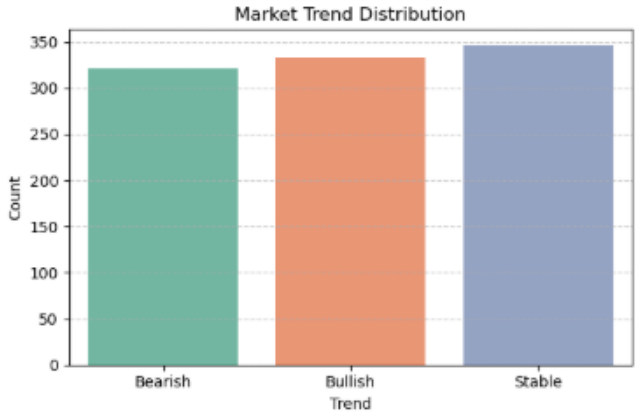
7. Stock Market simulation (2022-2024)

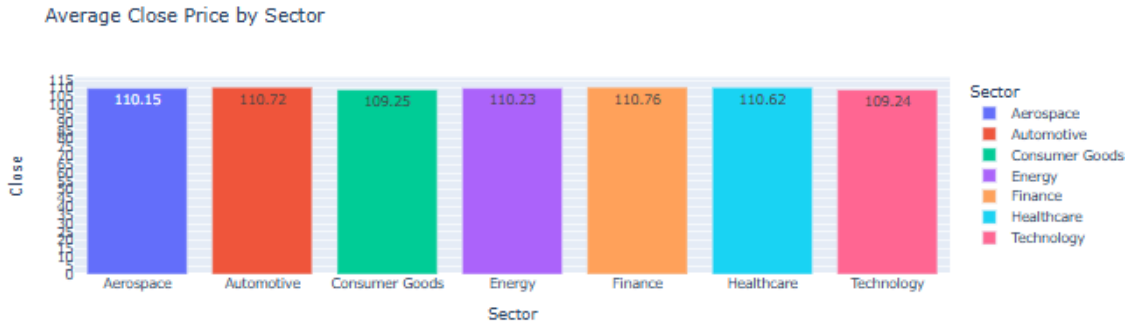
Dataset source: https://www.kaggle.com/datasets/samayashar/stock-market-simulation-dataset

Tool used: Python (pandas, matplotlib, seaborn, plotly)

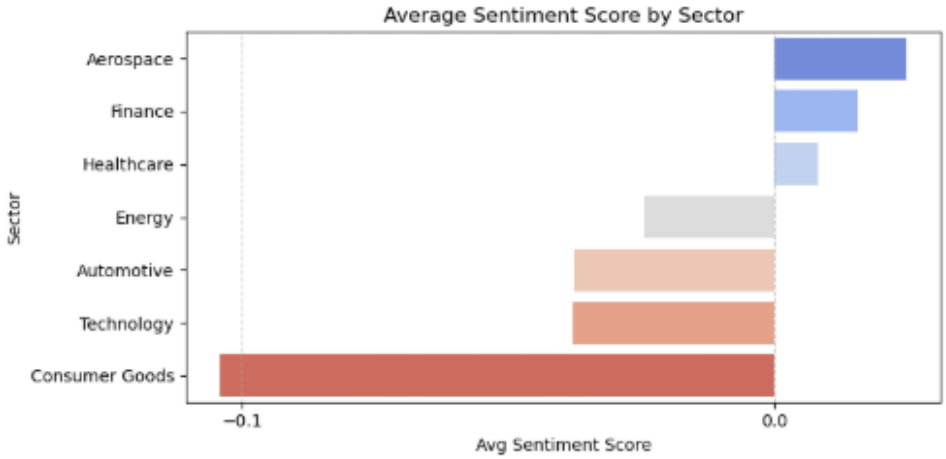
```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
import plotly.express as px
import matplotlib.ticker as ticker

# Load the dataset
df = pd.read_excel("synthetic_stock_data.xlsx")

# ------------------ 1. Trend Distribution (Improved) ------------------
plt.figure(figsize=(6, 4))
ax = sns.countplot(data=df, x='Trend', palette='Set2')

# Increase the number of ticks for accuracy
ax.yaxis.set_major_locator(ticker.MultipleLocator(50))
plt.title("Market Trend Distribution")
plt.xlabel("Trend")
plt.ylabel("Count")
plt.grid(axis='y', linestyle='--', alpha=0.7)
plt.tight_layout()
plt.show()

# ------------------ 2. Sector-wise Metrics ------------------
sector_summary = df.groupby('Sector').agg({
    'Close': 'mean',
    'PE_Ratio': 'mean',
    'Dividend_Yield': 'mean'
}).round(2).reset_index()

# Close Price
fig1 = px.bar(sector_summary, x='Sector', y='Close', title='Average Close Price by Sector',
              color='Sector', text='Close')
fig1.update_layout(yaxis=dict(tickmode="linear", dtick=5))  # Increase y-axis tick intervals
fig1.show()

# PE Ratio
fig2 = px.bar(sector_summary, x='Sector', y='PE_Ratio', title='Average PE Ratio by Sector',
              color='Sector', text='PE_Ratio')
fig2.update_layout(yaxis=dict(tickmode="linear", dtick=2))  # Increase y-axis tick intervals
fig2.show()

# Dividend Yield
fig3 = px.bar(sector_summary, x='Sector', y='Dividend_Yield', title='Average Dividend Yield by Sector',
              color='Sector', text='Dividend_Yield')
fig3.update_layout(yaxis=dict(tickmode="linear", dtick=0.5))  # Increase y-axis tick intervals
fig3.show()
```

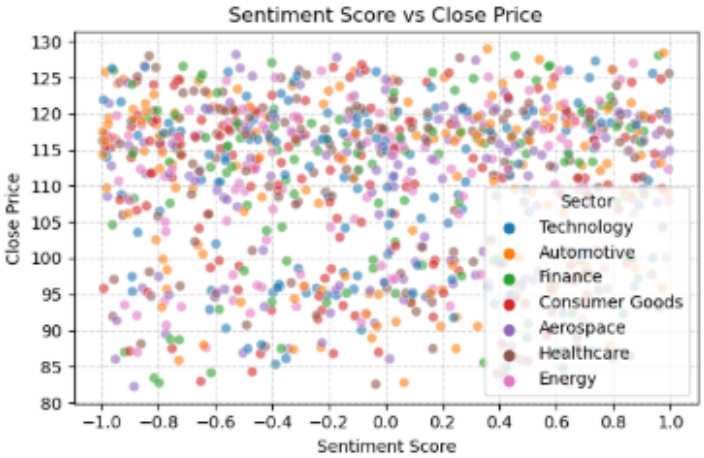
```python
# ------------------ 3. Sentiment Score by Sector ------------------
sentiment_summary = df.groupby('Sector')['Sentiment_Score'].mean().reset_index().sort_values(by='Sentiment_Score', ascending=False)

plt.figure(figsize=(8, 4))
ax = sns.barplot(data=sentiment_summary, x='Sentiment_Score', y='Sector', palette='coolwarm')

# Increase the number of ticks for better accuracy
ax.xaxis.set_major_locator(ticker.MultipleLocator(0.1))
plt.title("Average Sentiment Score by Sector")
plt.xlabel("Avg Sentiment Score")
plt.ylabel("Sector")
plt.grid(axis='x', linestyle='--', alpha=0.7)
plt.tight_layout()
plt.show()

# ------------------ 4. Sentiment vs Close Price ------------------
plt.figure(figsize=(6, 4))
ax = sns.scatterplot(data=df, x='Sentiment_Score', y='Close', hue='Sector', alpha=0.6)

# More ticks for better accuracy
ax.xaxis.set_major_locator(ticker.MultipleLocator(0.2))
ax.yaxis.set_major_locator(ticker.MultipleLocator(5))
plt.title("Sentiment Score vs Close Price")
plt.xlabel("Sentiment Score")
plt.ylabel("Close Price")
plt.grid(True, linestyle='--', alpha=0.5)
plt.tight_layout()
plt.show()

# ------------------ 5. Time Series Close Price (Sample Company) ------------------
company_name = df['Company'].unique()[0]
company_df = df[df['Company'] == company_name]

plt.figure(figsize=(10, 5))
ax = plt.plot(company_df['Date'], company_df['Close'], marker='o')

# Increase x-axis intervals for better readability
plt.xticks(rotation=45)
plt.locator_params(axis='x', nbins=10)  # Increase the number of x-axis ticks

plt.title(f"Time Series Close Price: {company_name}")
plt.xlabel("Date")
plt.ylabel("Close Price")
plt.grid(True, linestyle='--', alpha=0.5)
plt.tight_layout()
plt.show()
```

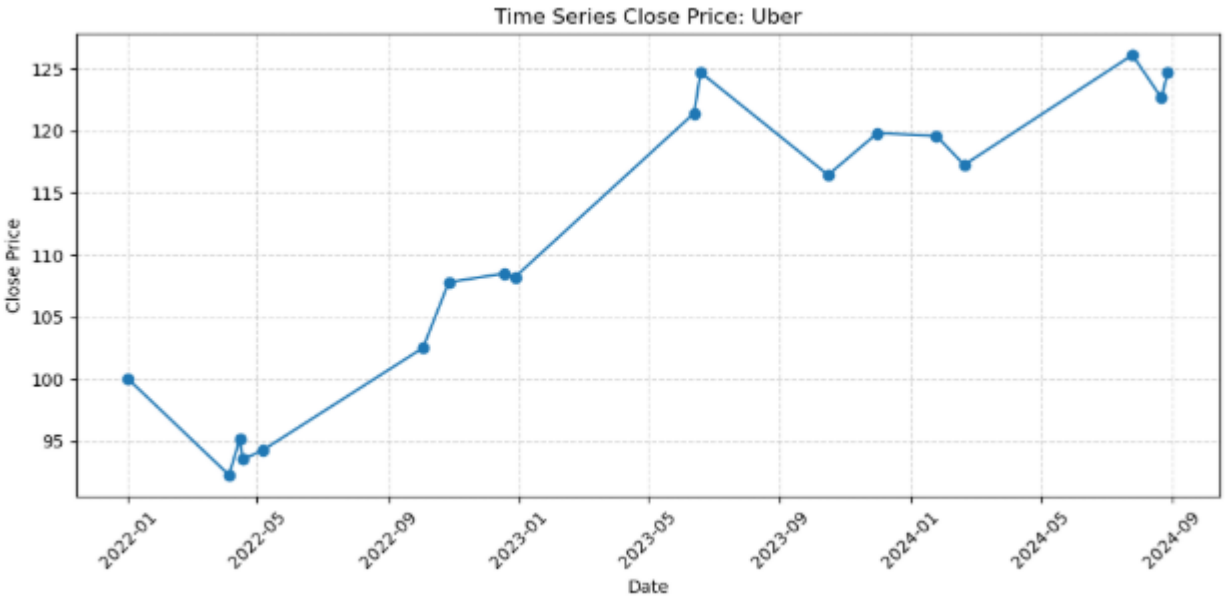





Average Dividend Yield by Sector
Dividend_Yield
2.69
2.48
2.58
2.6
2.46
2.55
2.48
Aerospace
Automotive
Consumer Goods
Energy
Finance
Healthcare
Technology
Sector


Average Sentiment Score by Sector
Aerospace
Finance
Healthcare
Energy
Automotive
Technology
Consumer Goods
Sector
−0.1
0.0
Avg Sentiment Score


Sentiment Score vs Close Price
Close Price
Sentiment Score
Sector
Technology
Automotive
Finance
Consumer Goods
Aerospace
Healthcare
Energy


Time Series Close Price: Uber
Close Price
Date
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09