PERSONAL PORTFOLIO

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

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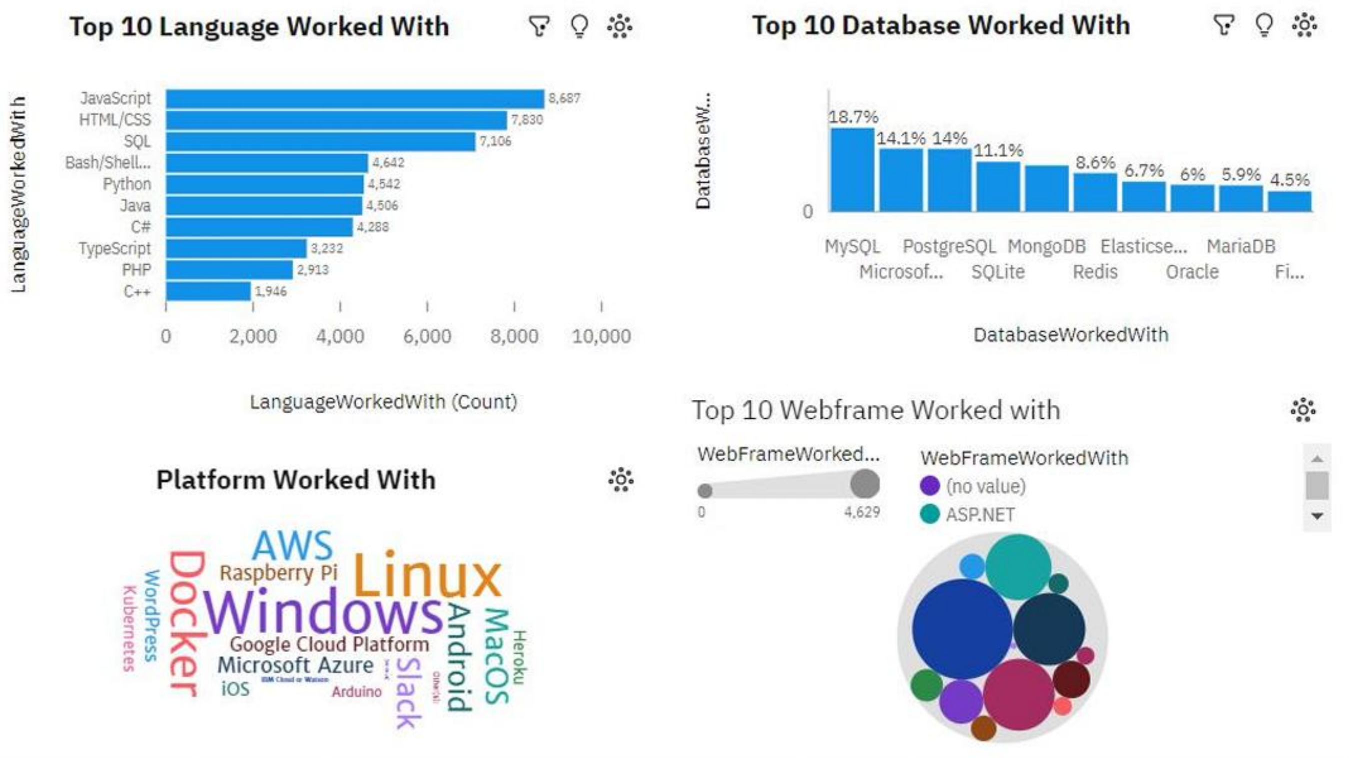
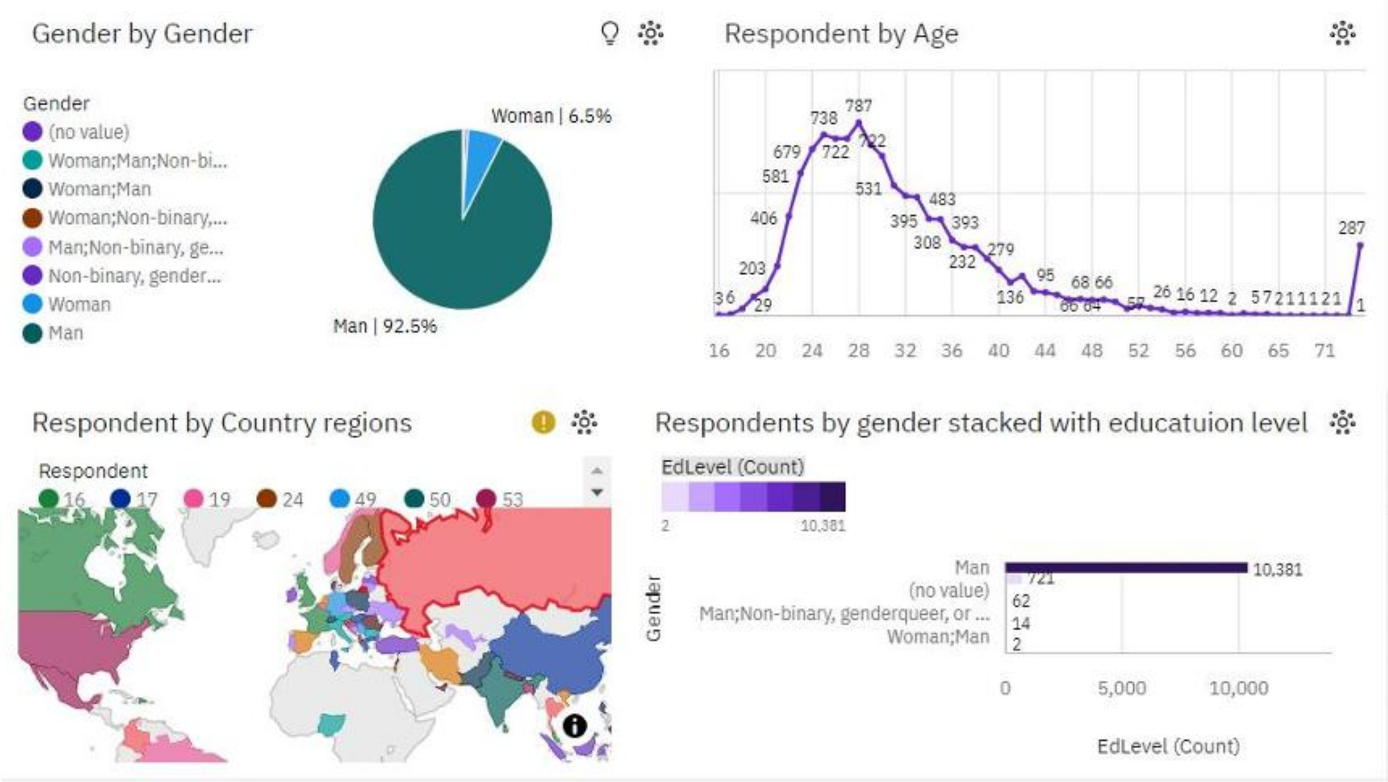
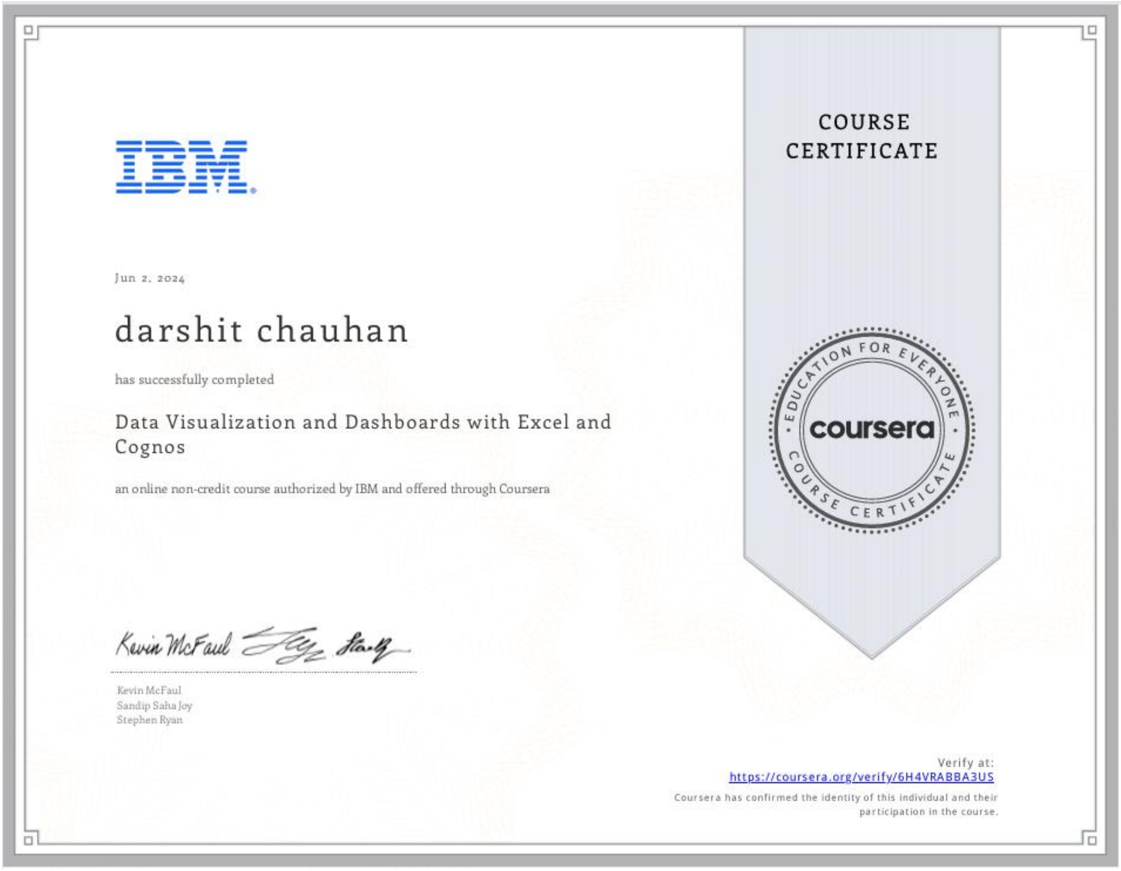
1. IBM Data Analytics course: Visualizations using Excel and IBM Cognos Analytics:





CERTIFICATION EARNED:



IBM

COURSE CERTIFICATE

Jun 2, 2024

darshit chauhan

has successfully completed

Data Visualization and Dashboards with Excel and Cognos

an online non-credit course authorized by IBM and offered through Coursera

Kevin McFaul

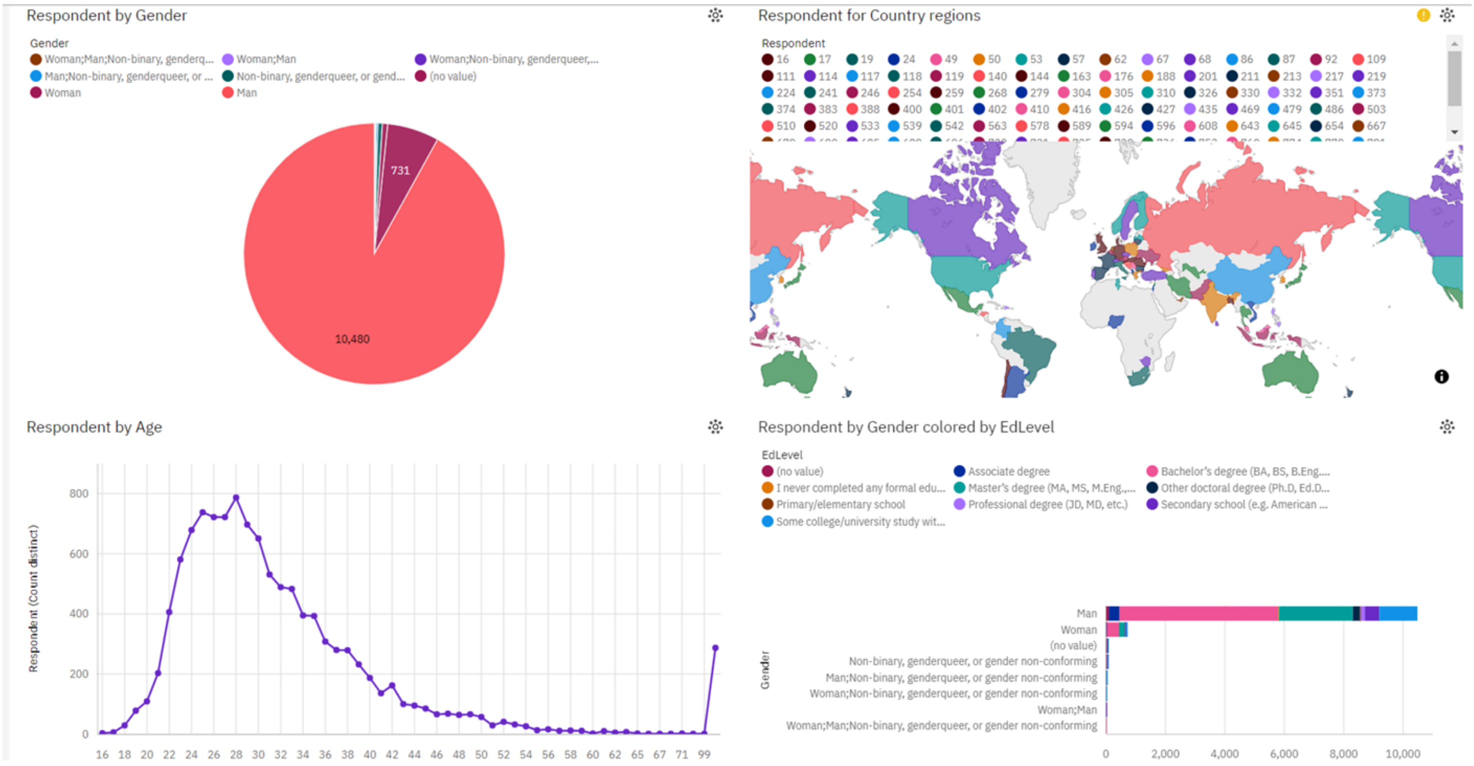
Kevin McFaul
Sandip Saha Joy
Stephen Ryan

EDUCATION FOR EVERYONE
coursera
COURSE CERTIFICATE

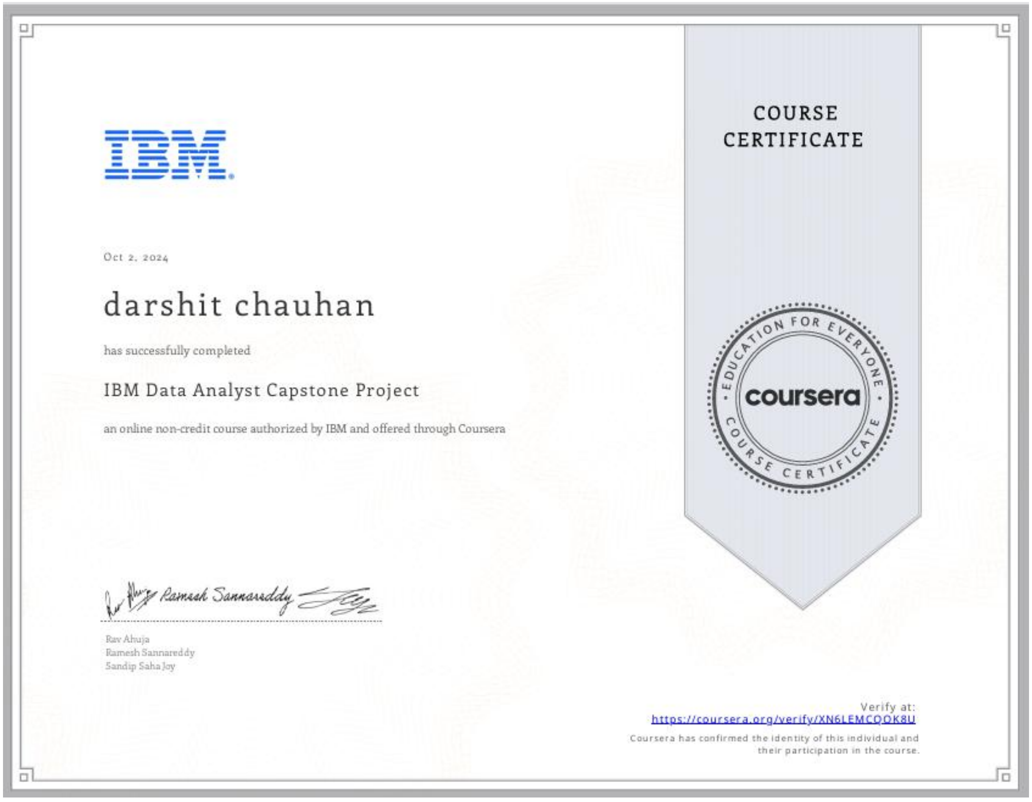
Verify at:
https://coursera.org/verify/6H4VRABBA3US
Coursera has confirmed the identity of this individual and their participation in the course.

2. IBM Data Analytics course: CAPSTONE PROJECT.

DEMOGRAPHICS DASHBOARD:


Respondent by Gender
Gender
Woman;Man;Non-binary, genderq...
Woman;Man
Woman;Non-binary, genderqueer,...
Man;Non-binary, genderqueer, or ...
Non-binary, genderqueer, or gend...
(no value)
Woman
Man
731
10,480
Respondent for Country regions
Respondent
16 17 19 24 49 50 53 57 62 67 68 86 87 92 109
111 114 117 118 119 140 144 163 176 188 201 211 213 217 219
224 241 246 254 259 268 279 304 305 310 326 330 332 351 373
374 383 388 400 401 402 410 416 426 427 435 469 479 486 503
510 520 533 539 542 563 578 589 594 596 608 643 645 654 667
Respondent by Age
Respondent (Count distinct)
800
600
400
200
0
16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 65 67 71 99
Respondent by Gender colored by EdLevel
EdLevel
(no value)
Associate degree
Bachelor’s degree (BA, BS, B.Eng....
I never completed any formal edu...
Master’s degree (MA, MS, M.Eng.,...
Other doctoral degree (Ph.D, Ed.D...
Primary/elementary school
Professional degree (JD, MD, etc.)
Secondary school (e.g. American ...
Some college/university study wit...
Gender
Man
Woman
(no value)
Non-binary, genderqueer, or gender non-conforming
Man;Non-binary, genderqueer, or gender non-conforming
Woman;Non-binary, genderqueer, or gender non-conforming
Woman;Man
Woman;Man;Non-binary, genderqueer, or gender non-conforming
0
2,000
4,000
6,000
8,000
10,000

CERTIFICATION EARNED:



IBM

COURSE CERTIFICATE

Oct 2, 2024

darshit chauhan

has successfully completed

IBM Data Analyst Capstone Project

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Ramesh Sannareddy

Rav Ahuja
Ramesh Sannareddy
Sandip Saha Joy

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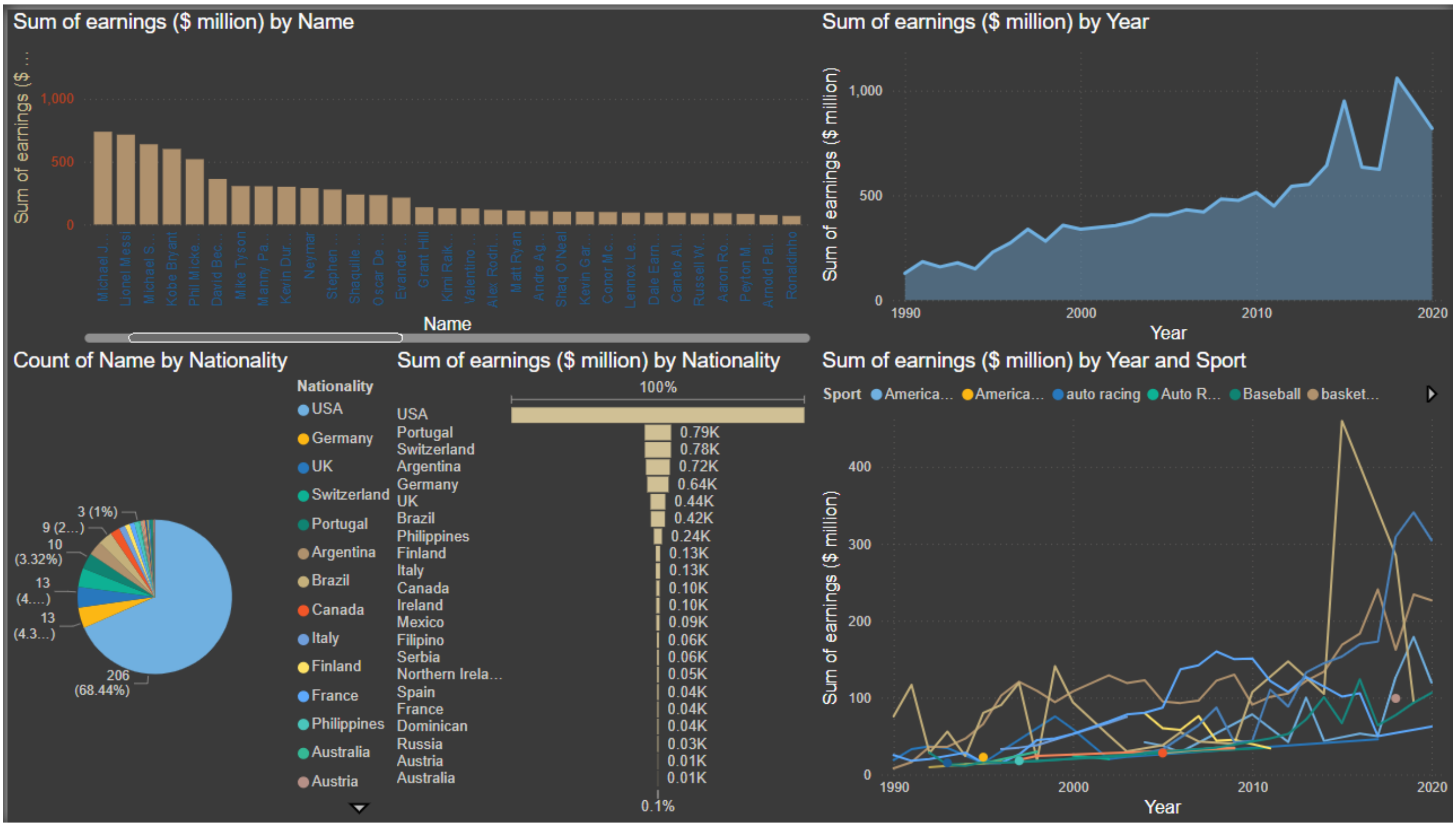
https://coursera.org/verify/XN6LEMCQOK8U

Coursera has confirmed the identity of this individual and their participation in the course.

3. Forbes Highest Paid Athletes (1990-2020).

Dataset source: https://www.kaggle.com/datasets/parulpandey/forbes-highest-paid-athletes-19902019

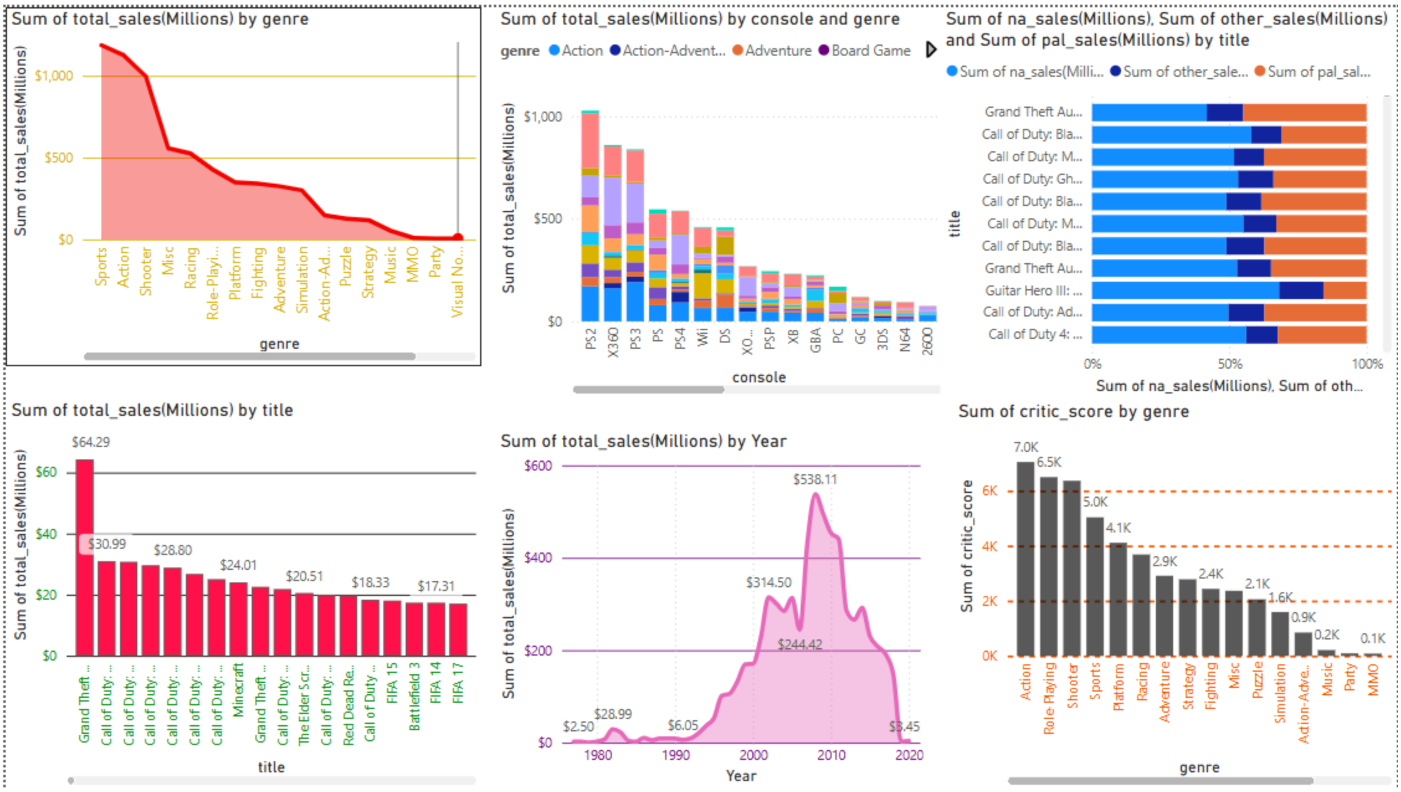
Tool used: MS Excel, MS Power BI



4. Video games sales.

Dataset source: https://mavenanalytics.io/dataplayground?dataStructure=Single%20table&order=date_added%2Cdesc

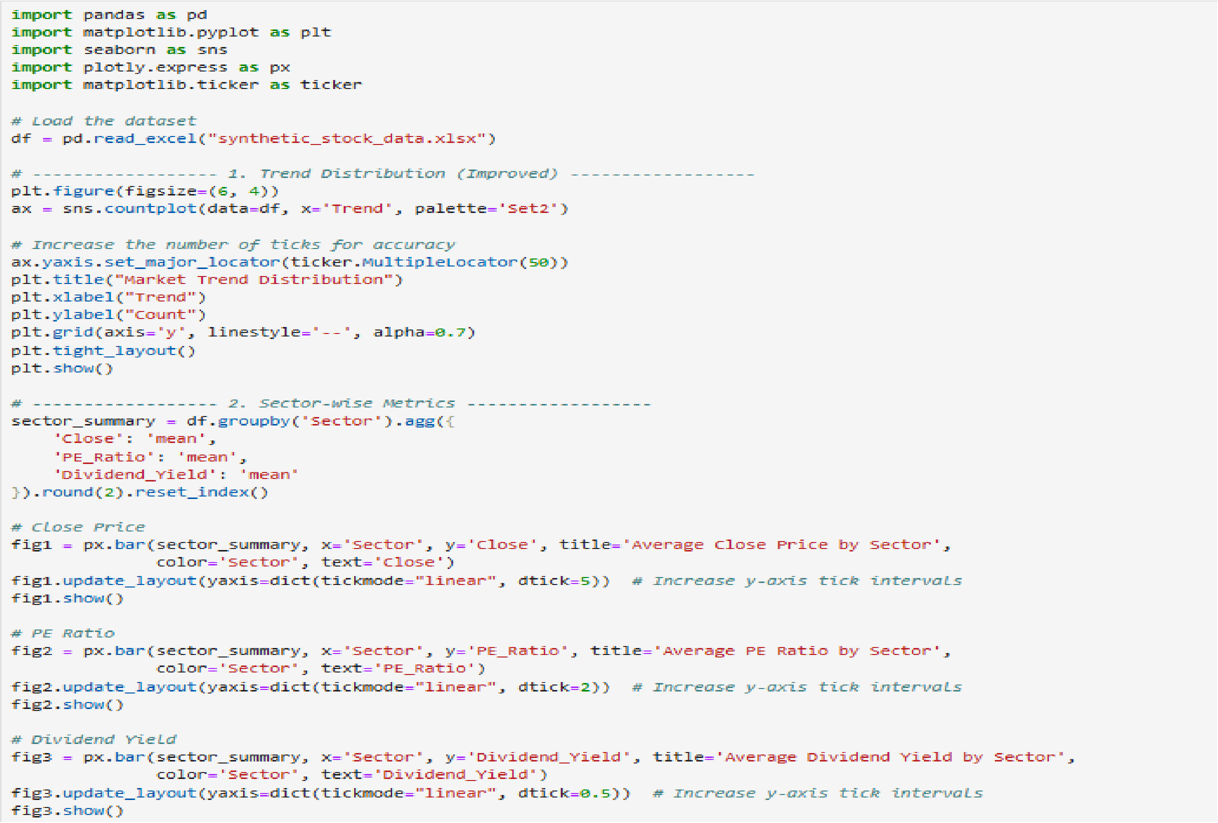
Tool used: MS Excel, MS Power BI



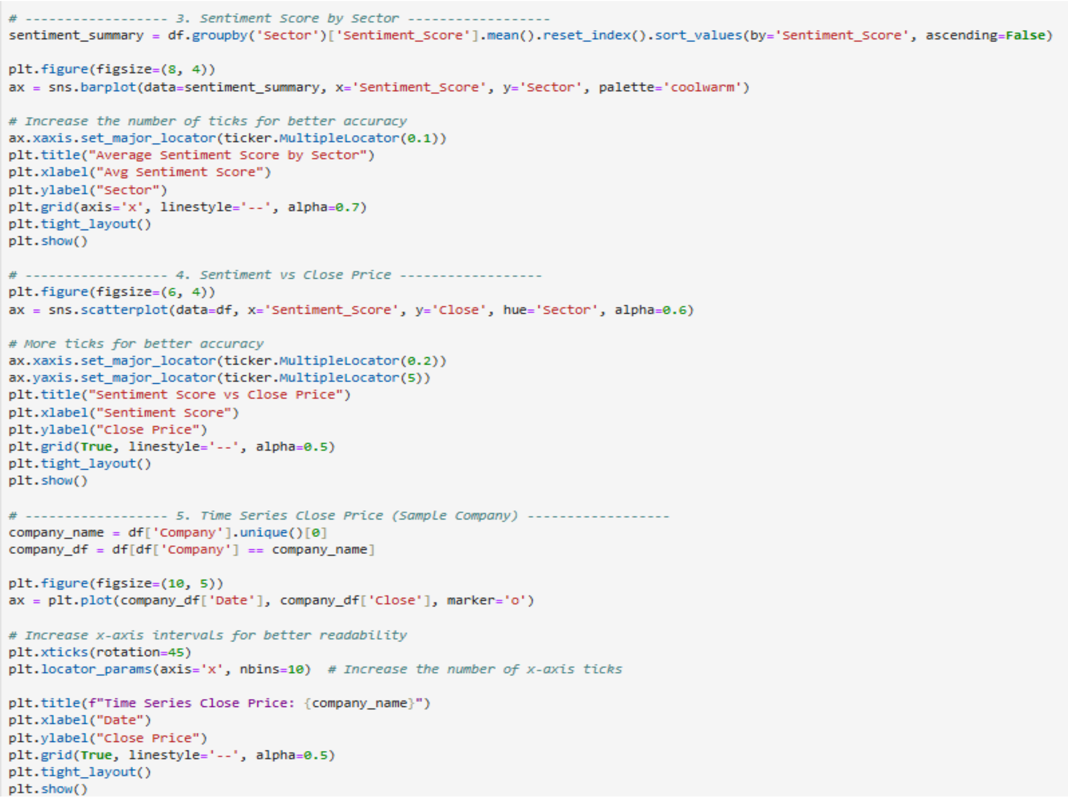
5. Stock Market simulation (2022-2024)

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

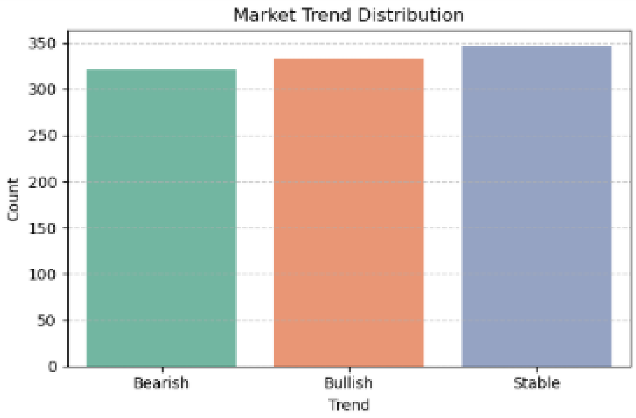
Tool used: Python

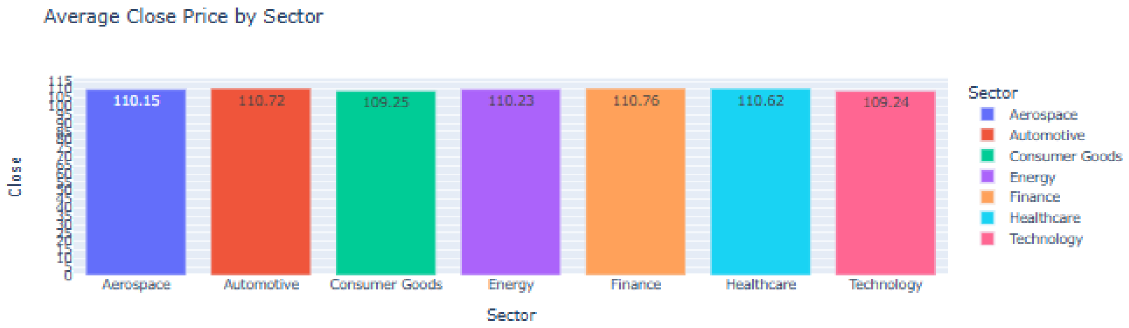


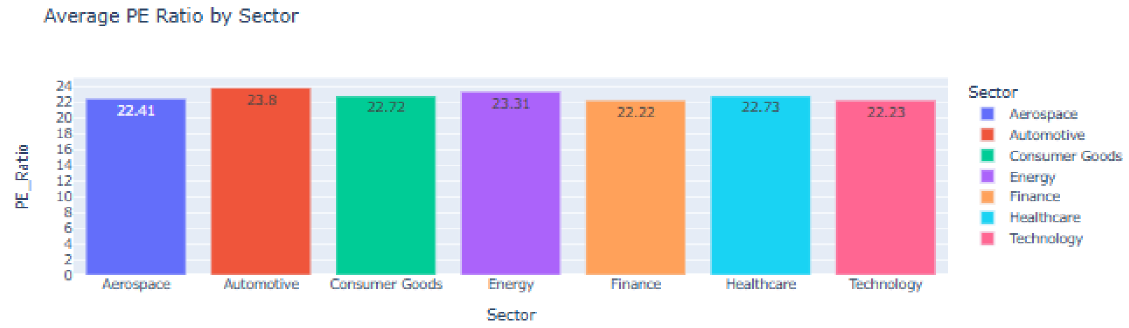
```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
import plotly.express as px
import matplotlib.ticker as ticker

# 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()
```

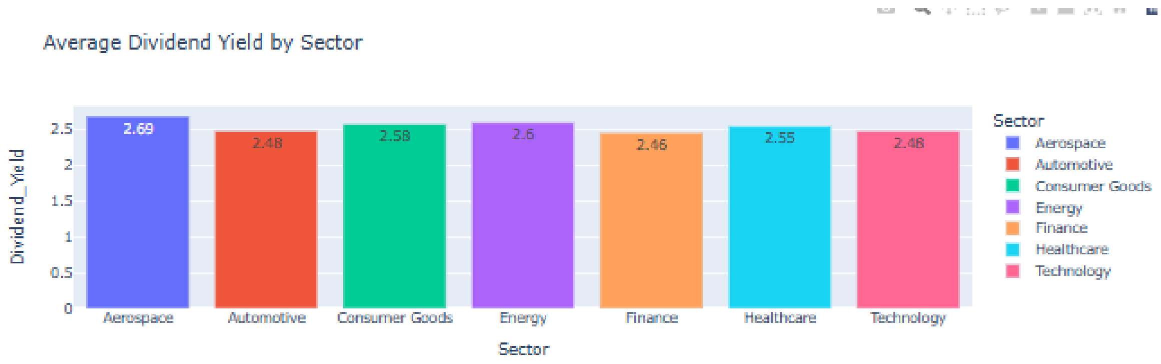


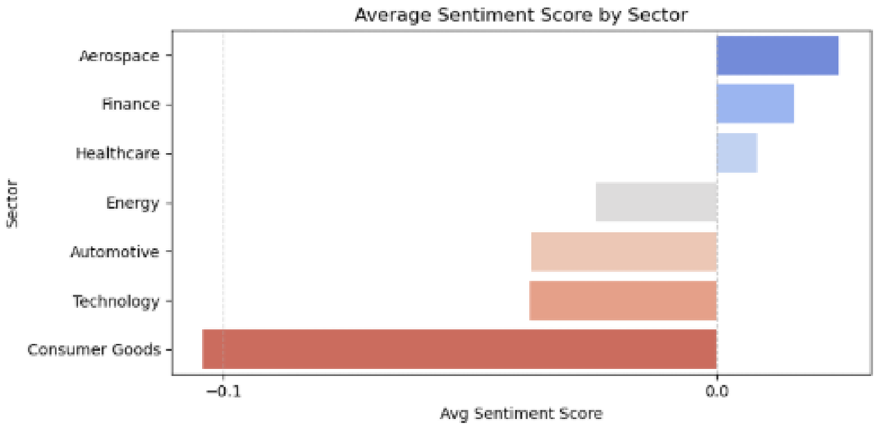
```python
# ------------------ 3. Sentiment Score by Sector ------------------
sentiment_summary = df.groupby('Sector')['Sentiment_Score'].mean().reset_index().sort_values(by='Sentiment_Score', ascending=False)

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()
```

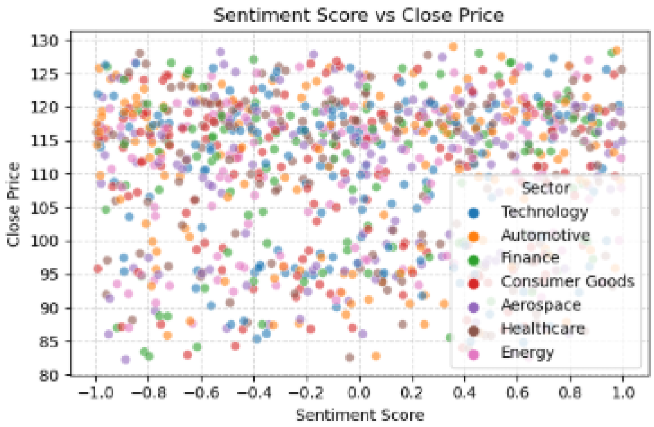


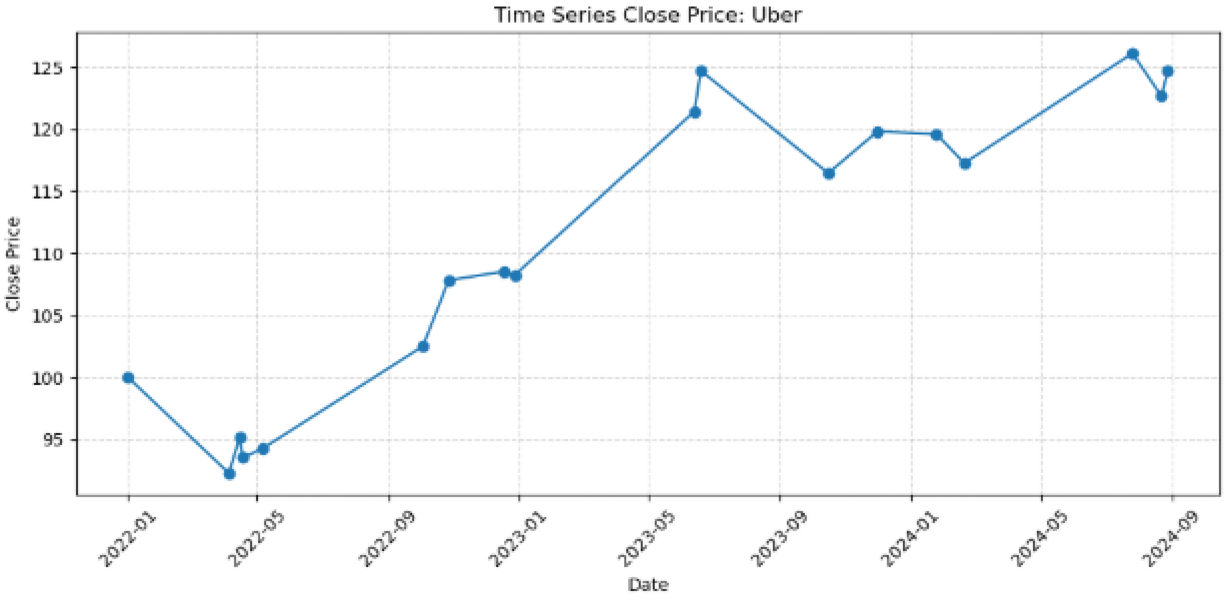





Average Dividend Yield by Sector
Dividend_Yield
Sector
2.69
2.48
2.58
2.6
2.46
2.55
2.48
0
0.5
1
1.5
2
2.5
Aerospace
Automotive
Consumer Goods
Energy
Finance
Healthcare
Technology
Sector
Aerospace
Automotive
Consumer Goods
Energy
Finance
Healthcare
Technology


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

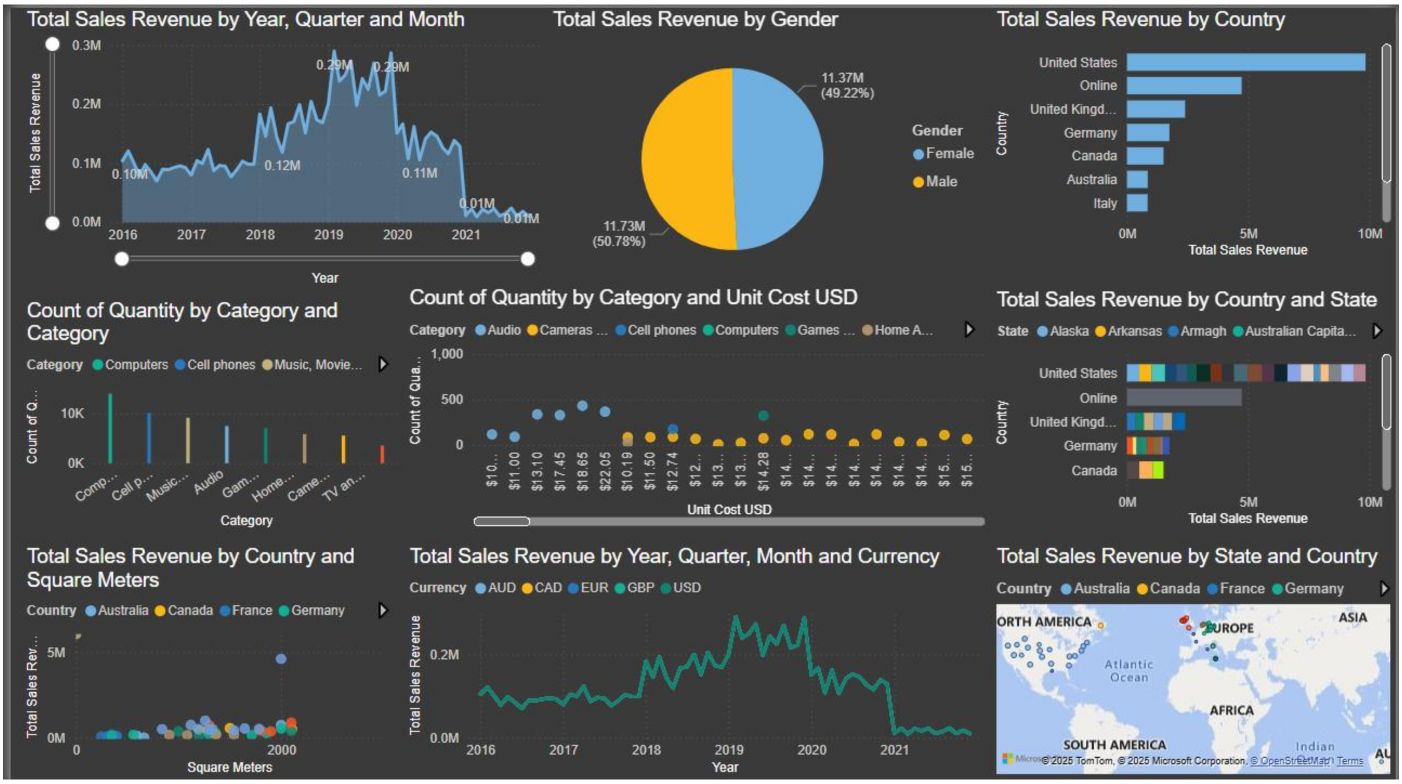

Sentiment Score vs Close Price
Close Price
130
125
120
115
110
105
100
95
90
85
80
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
0.4
0.6
0.8
1.0
Sentiment Score
Sector
Technology
Automotive
Finance
Consumer Goods
Aerospace
Healthcare
Energy


Time Series Close Price: Uber
Close Price
125
120
115
110
105
100
95
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
Date

6. Global Electronics retailer: (Multiple Table Dashboard [using joins and DAX script])

Dataset Source:

https://mavenanalytics.io/dataplayground?dataStructure=Multiple%20tables&order=date_added%2Cdesc&page=2&pageSize=5


Total Sales Revenue by Year, Quarter and Month
0.3M
0.2M
0.1M
0.0M
Total Sales Revenue
0.29M
0.29M
0.10M
0.12M
0.11M
0.01M
0.01M
2016
2017
2018
2019
2020
2021
Year
Total Sales Revenue by Gender
11.37M (49.22%)
11.73M (50.78%)
Gender
Female
Male
Total Sales Revenue by Country
Country
United States
Online
United Kingd...
Germany
Canada
Australia
Italy
0M
5M
10M
Total Sales Revenue
Count of Quantity by Category and Category
Category
Computers
Cell phones
Music, Movie...
Count of Q...
10K
0K
Comp...
Cell p...
Music...
Audio
Gam...
Home...
Came...
TV an...
Category
Count of Quantity by Category and Unit Cost USD
Category
Audio
Cameras ...
Cell phones
Computers
Games ...
Home A...
Count of Qua...
1,000
500
0
$10...
$11.00
$13.10
$17.45
$18.65
$22.05
$10.19
$11.50
$12.74
$12...
$13...
$13...
$14.28
$14...
$14...
$14...
$14...
$14...
$14...
$15...
$15...
Unit Cost USD
Total Sales Revenue by Country and State
State
Alaska
Arkansas
Armagh
Australian Capita...
Country
United States
Online
United Kingd...
Germany
Canada
0M
5M
10M
Total Sales Revenue
Total Sales Revenue by Country and Square Meters
Country
Australia
Canada
France
Germany
Total Sales Rev...
5M
0M
0
2000
Square Meters
Total Sales Revenue by Year, Quarter, Month and Currency
Currency
AUD
CAD
EUR
GBP
USD
Total Sales Revenue
0.2M
0.0M
2016
2017
2018
2019
2020
2021
Year
Total Sales Revenue by State and Country
Country
Australia
Canada
France
Germany
ORTH AMERICA
EUROPE
ASIA
Atlantic Ocean
AFRICA
SOUTH AMERICA
Indian
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