

```
pip install wbgapi pandas matplotlib seaborn
```

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Requirement already satisfied: wbgapi in /usr/local/lib/python3.11/dist-packages (1.0.12)
Requirement already satisfied: pandas in /usr/local/lib/python3.11/dist-packages (2.2.2)
Requirement already satisfied: matplotlib in /usr/local/lib/python3.11/dist-packages (3.10.0)
Requirement already satisfied: seaborn in /usr/local/lib/python3.11/dist-packages (0.13.2)
Requirement already satisfied: requests in /usr/local/lib/python3.11/dist-packages (from wbgapi) (2.32.3)
Requirement already satisfied: PyYAML in /usr/local/lib/python3.11/dist-packages (from wbgapi) (6.0.2)
Requirement already satisfied: tabulate in /usr/local/lib/python3.11/dist-packages (from wbgapi) (0.9.0)
Requirement already satisfied: numpy>=1.23.2 in /usr/local/lib/python3.11/dist-packages (from pandas) (2.0.2)
Requirement already satisfied: python-dateutil>=2.8.2 in /usr/local/lib/python3.11/dist-packages (from pandas) (2.9.0.post0)
Requirement already satisfied: pytz>=2020.1 in /usr/local/lib/python3.11/dist-packages (from pandas) (2025.2)
Requirement already satisfied: tzdata>=2022.7 in /usr/local/lib/python3.11/dist-packages (from pandas) (2025.2)
Requirement already satisfied: contourpy>=1.0.1 in /usr/local/lib/python3.11/dist-packages (from matplotlib) (1.3.2)
Requirement already satisfied: cycler>=0.10 in /usr/local/lib/python3.11/dist-packages (from matplotlib) (0.12.1)
Requirement already satisfied: fonttools>=4.22.0 in /usr/local/lib/python3.11/dist-packages (from matplotlib) (4.58.4)
Requirement already satisfied: kiwisolver>=1.3.1 in /usr/local/lib/python3.11/dist-packages (from matplotlib) (1.4.8)
Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.11/dist-packages (from matplotlib) (24.2)
Requirement already satisfied: pillow>=8 in /usr/local/lib/python3.11/dist-packages (from matplotlib) (11.2.1)
Requirement already satisfied: pyparsing>=2.3.1 in /usr/local/lib/python3.11/dist-packages (from matplotlib) (3.2.3)
Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.11/dist-packages (from python-dateutil>=2.8.2->pandas) (1.17.0)
Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.11/dist-packages (from requests->wbgapi) (3.4.2)
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.11/dist-packages (from requests->wbgapi) (3.10)
Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.11/dist-packages (from requests->wbgapi) (2.4.0)
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.11/dist-packages (from requests->wbgapi) (2025.6.15)
```

```
import wbgapi as wb
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

```
df = pd.read_csv('demographic_data.csv')
df.head()
```

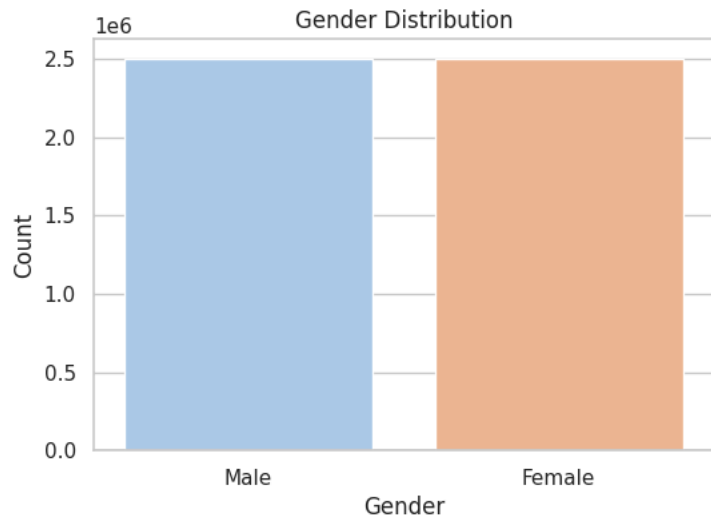
	Name	Gender	Country	Age	Income	Education Level	Occupation	Marital Status	Number of Children	Location Type	Health Index	Exercise Frequency	Diet Quality Score	Credit Score
0	Любомир Эдгарович Титов	Male	Russia	50	152.0884	Master's	Tech	Divorced	4	Suburban	43.6718	10.0000	6.6544	595.7
1	Mercedes Badillo Jurado	Female	Mexico	33	21.3900	Not Finish Highschool	Tech	Divorced	3	Rural	40.0142	3.6052	9.9224	679.9
2	鈴木 真綾	Female	Japan	43	12.9380	Master's	Transportation	Married	1	Rural	56.0677	1.1788	4.1207	601.9
3	Romil Bora	Female	India	44	33.0745	Bachelor's	Service	Married	0	Urban	41.7896	5.4522	4.9983	724.4
4	Krish	Female	India	44	44.0000	Master's	Administration	Married	0	Urban	37.0045	0.0000	0.0000	640.0

```
df.columns
```

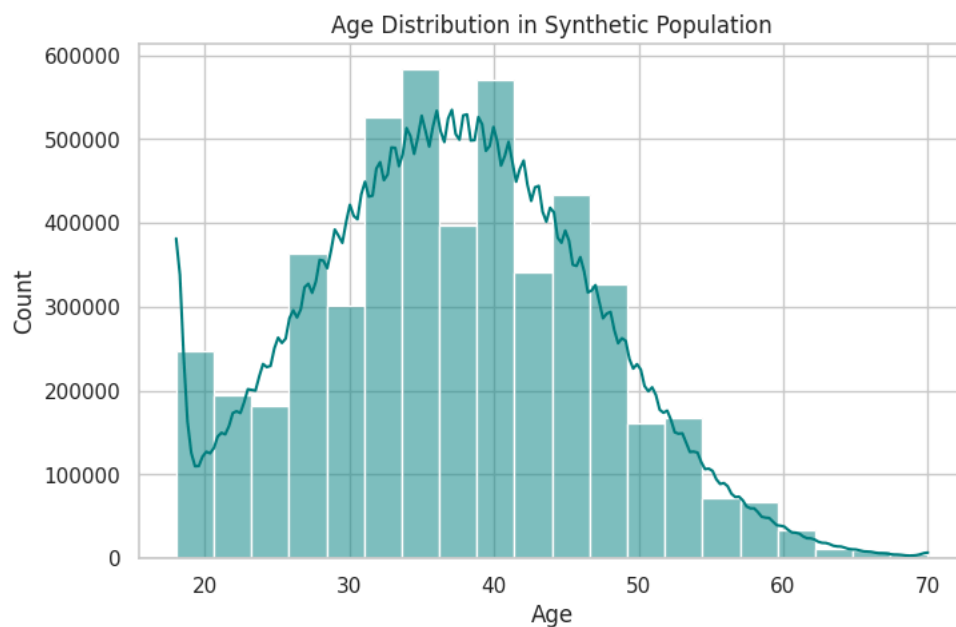
```
Index(['Name', 'Gender', 'Country', 'Age', 'Income', 'Education Level', 'Occupation', 'Marital Status', 'Number of Children', 'Location Type', 'Health Index', 'Exercise Frequency', 'Diet Quality Score', 'Credit Score', 'Car Ownership'], dtype='object')
```

```
sns.set(style="whitegrid")
```

```
plt.figure(figsize=(6,4))
sns.countplot(x='Gender', data=df, palette='pastel')
plt.title('Gender Distribution')
plt.xlabel('Gender')
plt.ylabel('Count')
plt.show()
```

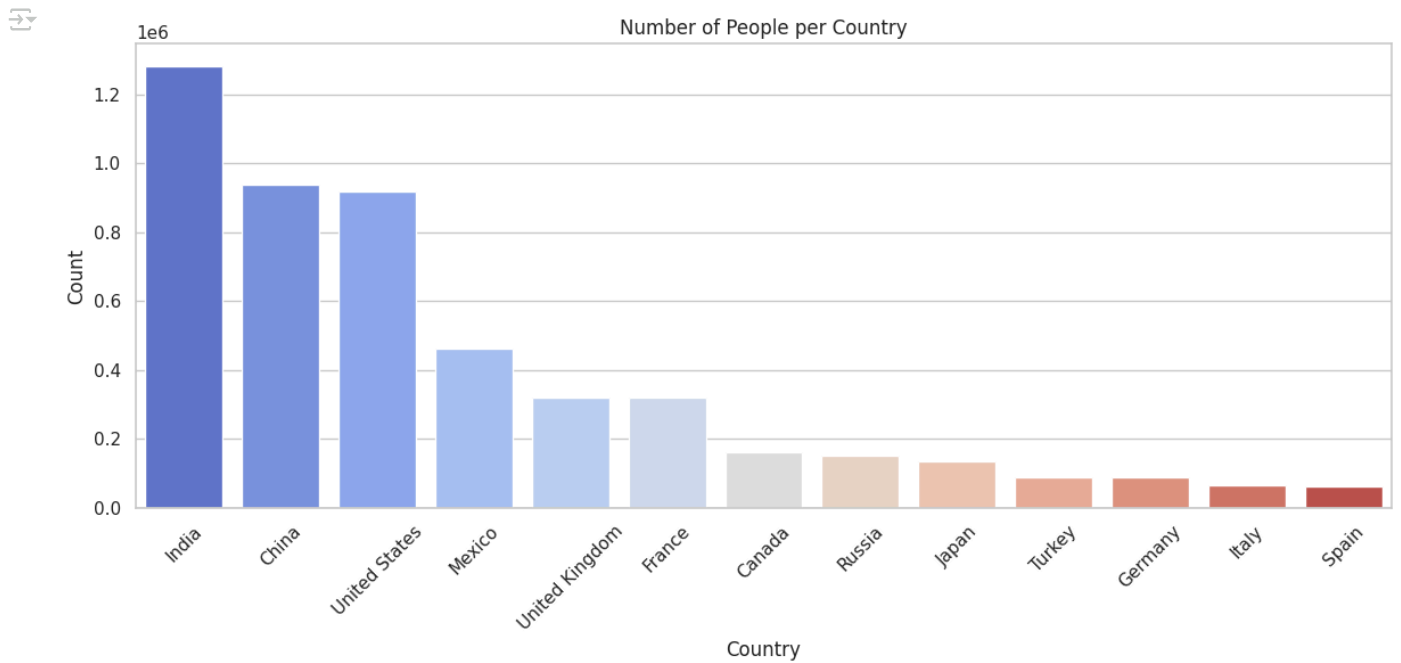


```
plt.figure(figsize=(8,5))
sns.histplot(df['Age'], bins=20, kde=True, color='teal')
plt.title('Age Distribution in Synthetic Population')
plt.xlabel('Age')
plt.ylabel('Count')
plt.show()
```



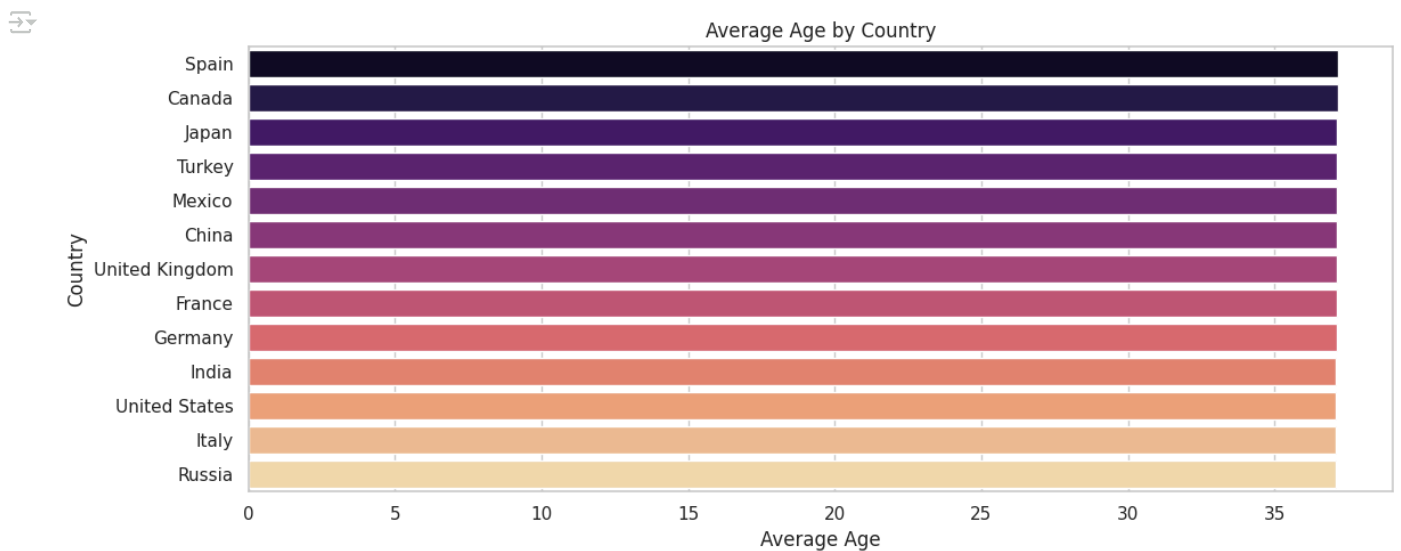
```
country_counts = df['Country'].value_counts()

plt.figure(figsize=(12, 6))
sns.barplot(x=country_counts.index, y=country_counts.values, palette='coolwarm')
plt.title('Number of People per Country')
plt.xlabel('Country')
plt.ylabel('Count')
plt.xticks(rotation=45)
plt.tight_layout()
plt.show()
```



```
avg_age = df.groupby('Country')['Age'].mean().sort_values(ascending=False)
```

```
plt.figure(figsize=(12, 5))
sns.barplot(x=avg_age.values, y=avg_age.index, palette='magma')
plt.title('Average Age by Country')
plt.xlabel('Average Age')
plt.ylabel('Country')
plt.tight_layout()
plt.show()
```



```
plt.figure(figsize=(8, 5))
sns.histplot(df['Income'], bins=30, kde=True, color='salmon')
plt.title('Income Distribution')
plt.xlabel('Income')
plt.ylabel('Number of People')
plt.grid(True)
plt.tight_layout()
plt.show()
```

