

```
In [1]: #step1 . import all libraries  
import numpy as np  
import pandas as pd  
import matplotlib.pyplot as plt
```

```
In [2]: #step 2 . reading dataset from csv file  
df = pd.read_csv('Global_AI_Content_Impact_Dataset.csv')  
print(df)
```

	Country	Year	Industry	AI Adoption Rate (%) \
0	South Korea	2022	Media	44.29
1	China	2025	Legal	34.75
2	USA	2022	Automotive	81.06
3	France	2021	Legal	85.24
4	France	2021	Gaming	78.95
..	...	...	...	...
195	Germany	2021	Automotive	89.44
196	Germany	2020	Media	70.11
197	France	2023	Marketing	65.77
198	Australia	2023	Automotive	45.35
199	South Korea	2020	Healthcare	10.53

	AI-Generated Content Volume (TBs per year)	Job Loss Due to AI (%) \
0	33.09	16.77
1	66.74	46.89
2	96.13	10.66
3	93.76	27.70
4	45.62	17.45
..	...	...
195	52.98	48.47
196	28.26	27.62
197	49.83	39.94
198	20.49	33.21
199	20.97	23.64

	Revenue Increase Due to AI (%)	Human-AI Collaboration Rate (%) \
0	46.12	74.79
1	52.46	26.17
2	45.60	39.66
3	78.24	29.45
4	1.05	21.70
..	...	...
195	12.14	30.60
196	57.86	58.71
197	79.44	43.73
198	50.50	41.73
199	34.27	45.67

	Top AI Tools Used	Regulation Status	Consumer Trust in AI (%) \
0	Bard	Strict	40.77
1	DALL-E	Strict	35.67
2	Stable Diffusion	Moderate	54.47
3	Claude	Moderate	51.84
4	Midjourney	Strict	41.77
..	...	...	...
195	DALL-E	Lenient	77.21
196	DALL-E	Strict	78.74
197	Synthesia	Lenient	81.58
198	Claude	Strict	47.42
199	Stable Diffusion	Moderate	58.52

	Market Share of AI Companies (%)
0	18.73
1	35.02
2	22.76
3	1.93
4	21.41
..	...
195	44.35

196	31.73
197	14.62
198	43.11
199	33.37

[200 rows x 12 columns]

```
In [3]: # Show basic info
print(df.info())

# Preview data
print(df.head())
```

```

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 200 entries, 0 to 199
Data columns (total 12 columns):
#   Column                                          Non-Null Count  Dtype
---  -
0   Country                                       200 non-null    object
1   Year                                          200 non-null    int64
2   Industry                                     200 non-null    object
3   AI Adoption Rate (%)                        200 non-null    float64
4   AI-Generated Content Volume (TBs per year)  200 non-null    float64
5   Job Loss Due to AI (%)                     200 non-null    float64
6   Revenue Increase Due to AI (%)             200 non-null    float64
7   Human-AI Collaboration Rate (%)            200 non-null    float64
8   Top AI Tools Used                           200 non-null    object
9   Regulation Status                          200 non-null    object
10  Consumer Trust in AI (%)                    200 non-null    float64
11  Market Share of AI Companies (%)             200 non-null    float64
dtypes: float64(7), int64(1), object(4)
memory usage: 18.9+ KB
None

```

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```

In [4]: # Basic Descriptive Stats
print("\nDescriptive Statistics:")
print(df.describe())

```

## Descriptive Statistics:

	Year	AI Adoption Rate (%) \
count	200.000000	200.000000
mean	2022.315000	54.265850
std	1.825496	24.218067
min	2020.000000	10.530000
25%	2021.000000	33.222500
50%	2022.000000	53.310000
75%	2024.000000	76.220000
max	2025.000000	94.760000

	AI-Generated Content Volume (TBs per year)	Job Loss Due to AI (%) \
count	200.00000	200.000000
mean	46.07260	25.788250
std	29.16122	13.901105
min	1.04000	0.090000
25%	20.32250	14.995000
50%	44.32000	25.735000
75%	71.62000	37.417500
max	99.06000	49.710000

	Revenue Increase Due to AI (%)	Human-AI Collaboration Rate (%) \
count	200.000000	200.000000
mean	39.719450	54.102150
std	23.829545	19.247079
min	0.140000	20.210000
25%	17.907500	37.770000
50%	42.100000	54.515000
75%	58.697500	69.402500
max	79.550000	88.290000

	Consumer Trust in AI (%)	Market Share of AI Companies (%)
count	200.000000	200.000000
mean	59.425150	26.569550
std	17.319668	14.023729
min	30.120000	1.180000
25%	44.755000	14.052500
50%	59.215000	27.390000
75%	74.885000	38.432500
max	89.880000	49.280000

```
In [5]: print(df.isnull().sum())
```

```
Country          0
Year             0
Industry         0
AI Adoption Rate (%)  0
AI-Generated Content Volume (TBs per year)  0
Job Loss Due to AI (%)  0
Revenue Increase Due to AI (%)  0
Human-AI Collaboration Rate (%)  0
Top AI Tools Used  0
Regulation Status  0
Consumer Trust in AI (%)  0
Market Share of AI Companies (%)  0
dtype: int64
```

```
In [7]: #Removing Duplicates
df.drop_duplicates(inplace=True)
print(df)
```

	Country	Year	Industry	AI Adoption Rate (%) \
0	South Korea	2022	Media	44.29
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..	...	...	...	...
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[200 rows x 12 columns]

```
In [8]: # 1. Total Revenue Increase Analysis
print(df['Revenue Increase Due to AI (%)'])

total_revenue_increase = np.sum(df['Revenue Increase Due to AI (%)'])
print("Total Revenue Increase Due to AI (%):", total_revenue_increase)
```

0	46.12
1	52.46
2	45.60
3	78.24
4	1.05
	...
195	12.14
196	57.86
197	79.44
198	50.50
199	34.27

Name: Revenue Increase Due to AI (%), Length: 200, dtype: float64

Total Revenue Increase Due to AI (%): 7943.889999999999

```
In [10]: # Average Revenue Increase Per Industry
avg_revenue = df.groupby("Industry")["Revenue Increase Due to AI (%)"].mean()
print(avg_revenue)
```

Industry	
Automotive	46.482632
Education	39.543529
Finance	36.257143
Gaming	33.234444
Healthcare	38.586471
Legal	41.824118
Manufacturing	42.807222
Marketing	36.813684
Media	43.719677
Retail	37.679524

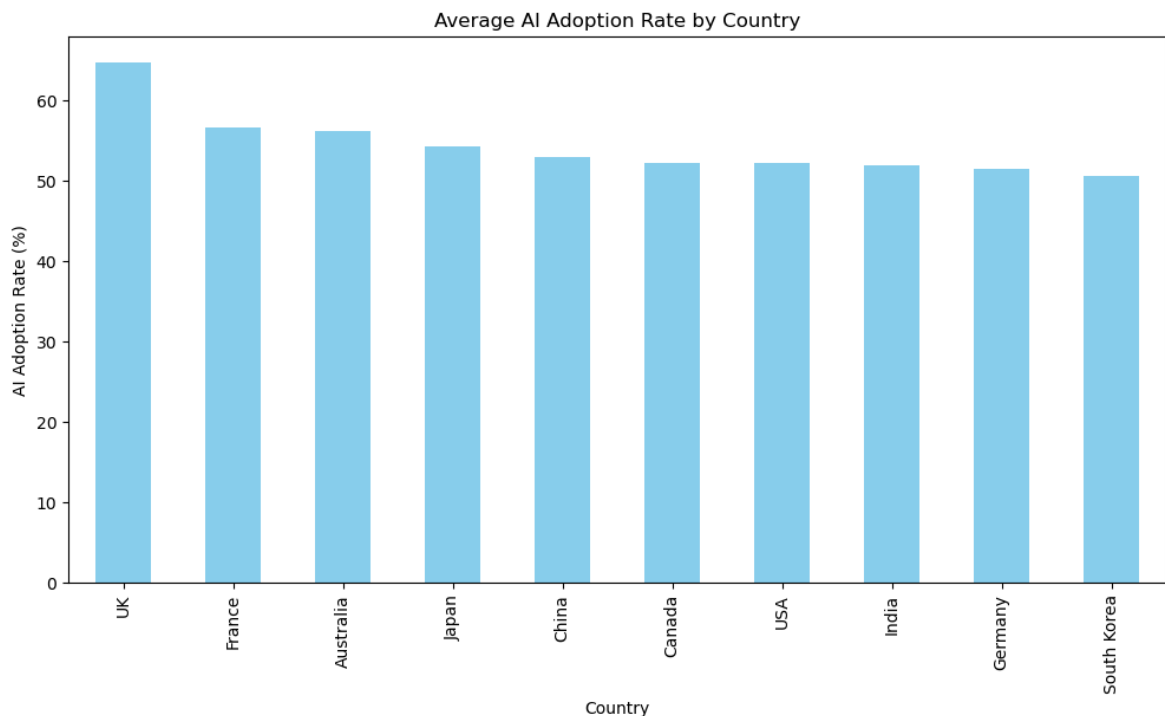
Name: Revenue Increase Due to AI (%), dtype: float64

```
In [11]: # Region-wise (Country-wise) Revenue Summary
country_revenue = df.groupby("Country")["Revenue Increase Due to AI (%)"].sum()
print(country_revenue)
```

Country	
Australia	745.52
Canada	620.05
China	894.52
France	949.30
Germany	689.87
India	961.83
Japan	761.39
South Korea	685.04
UK	722.44
USA	913.93

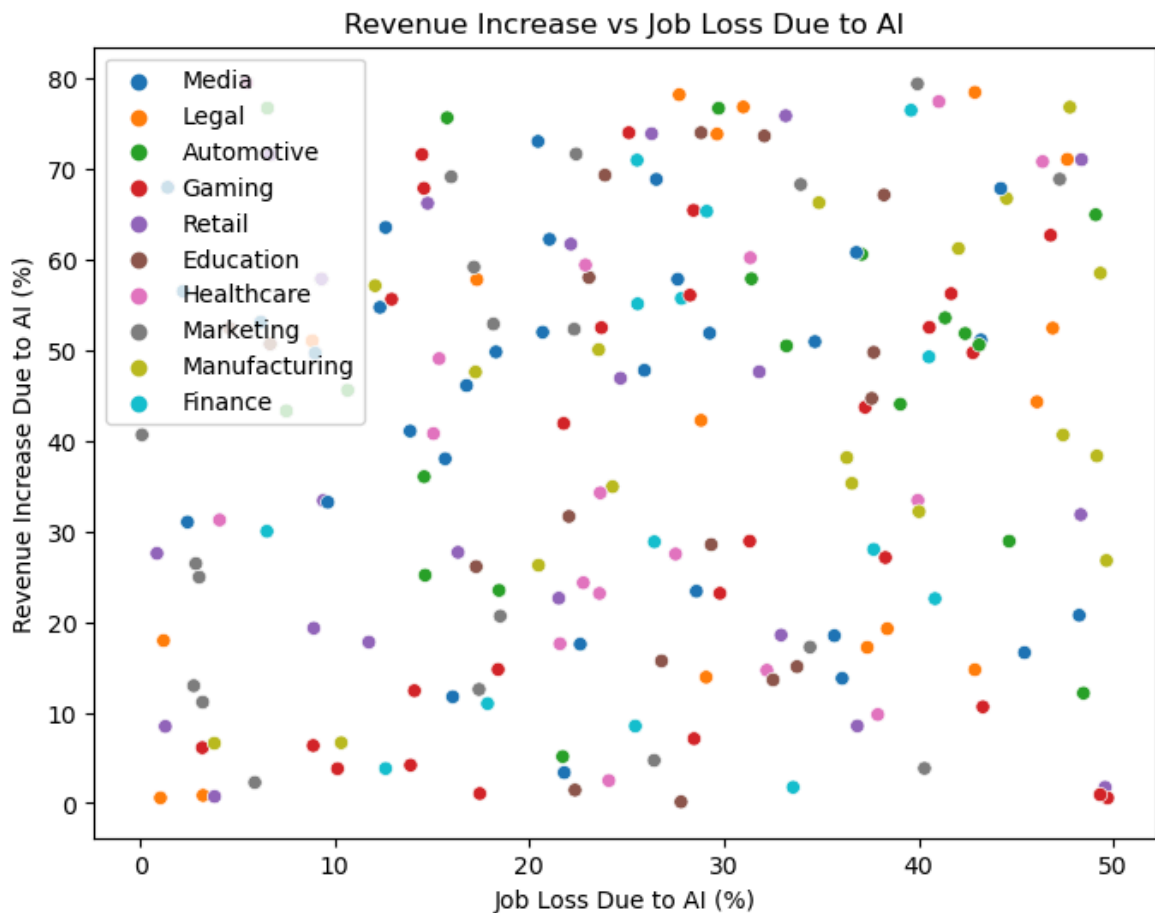
Name: Revenue Increase Due to AI (%), dtype: float64

```
In [21]: #AI Adoption by Country
plt.figure(figsize=(12, 6))
adopt_country = df.groupby('Country')['AI Adoption Rate (%)'].mean().sort_values
adopt_country.plot(kind='bar', color='skyblue')
plt.ylabel("AI Adoption Rate (%)")
plt.title("Average AI Adoption Rate by Country")
plt.show()
```



```
In [18]: # Revenue vs Job Loss
import matplotlib.pyplot as plt
import seaborn as sns
plt.figure(figsize=(8, 6))
sns.scatterplot(data=df,
                x='Job Loss Due to AI (%)',
                y='Revenue Increase Due to AI (%)',
                hue='Industry')
plt.title("Revenue Increase vs Job Loss Due to AI")
plt.xlabel("Job Loss Due to AI (%)")
plt.ylabel("Revenue Increase Due to AI (%)")
plt.legend()
plt.show()
```





```
In [11]: #Total revenue increase due to AI
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt

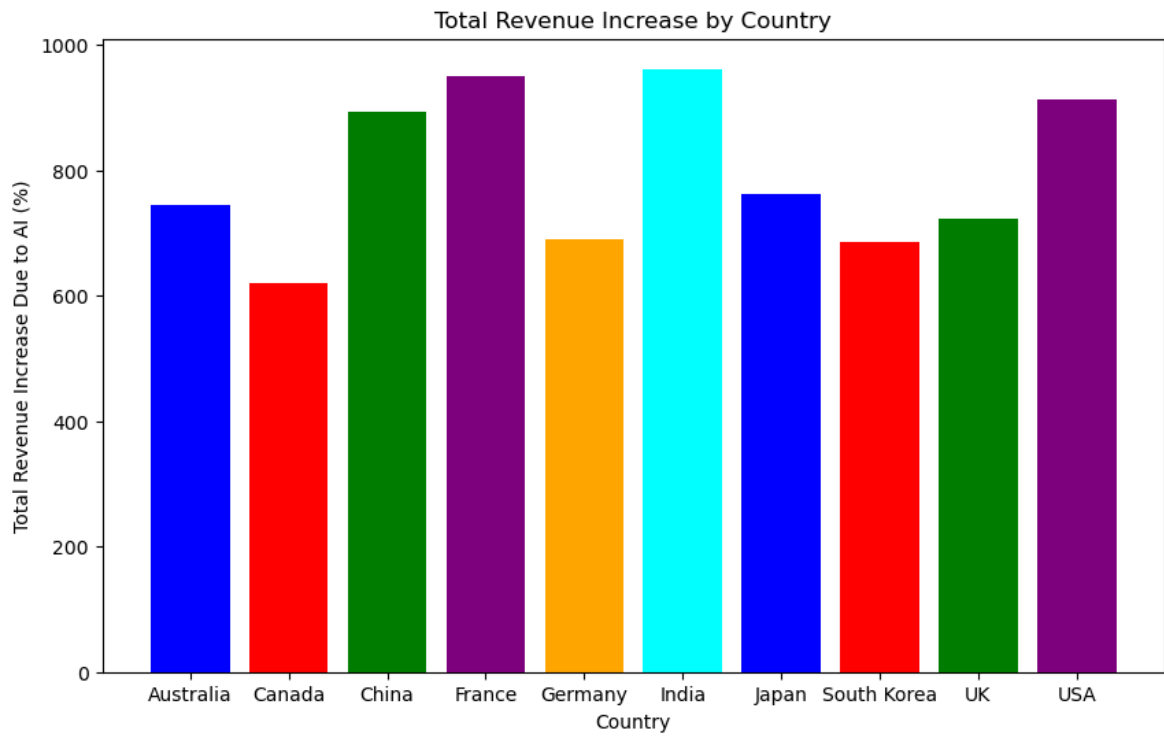
# Load the dataset
df = pd.read_csv("Global_AI_Content_Impact_Dataset.csv")

# Group by 'Country' and sum the 'Revenue Increase Due to AI (%)' (acting as 'Total revenue increase due to AI')
region_sales = df.groupby("Country")["Revenue Increase Due to AI (%)"].sum()

# Plotting the sales by region (country)
plt.figure(figsize=(10, 6))
plt.bar(region_sales.index, region_sales.values, color=['blue', 'red', 'green',

# Labels and title
plt.xlabel("Country")
plt.ylabel("Total Revenue Increase Due to AI (%)")
plt.title("Total Revenue Increase by Country")

# Show plot
plt.show()
```

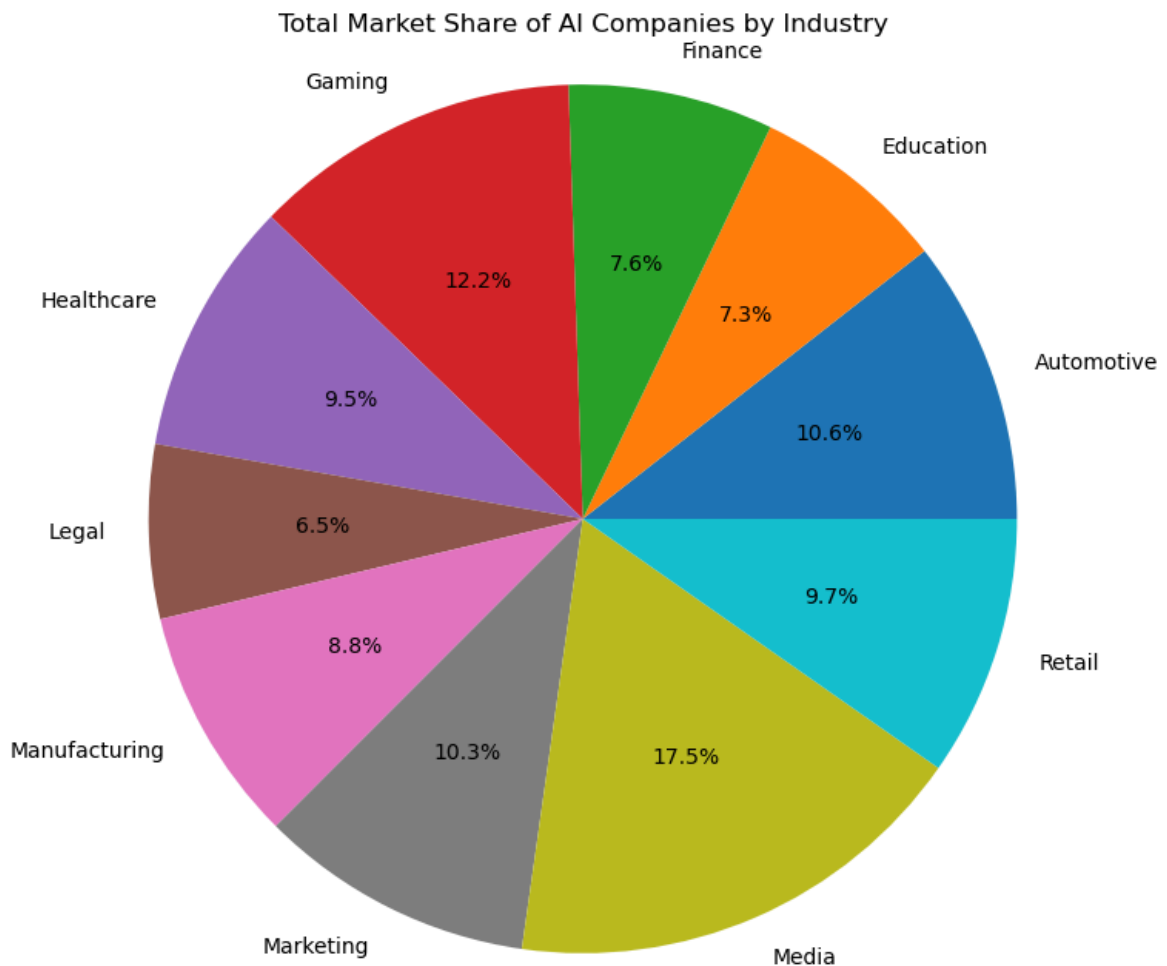


```
In [13]: import pandas as pd
import matplotlib.pyplot as plt

# Load the data
df = pd.read_csv('Global_AI_Content_Impact_Dataset.csv')

# Group by Industry and sum market share
industry_market_share = df.groupby("Industry")["Market Share of AI Companies (%)"]

# Plot pie chart
plt.figure(figsize=(8, 8))
plt.pie(industry_market_share, labels=industry_market_share.index, autopct='%1.1f%%')
plt.title("Total Market Share of AI Companies by Industry")
plt.axis('equal') # Make the pie chart circular
plt.show()
```



```
In [9]: import pandas as pd
import matplotlib.pyplot as plt

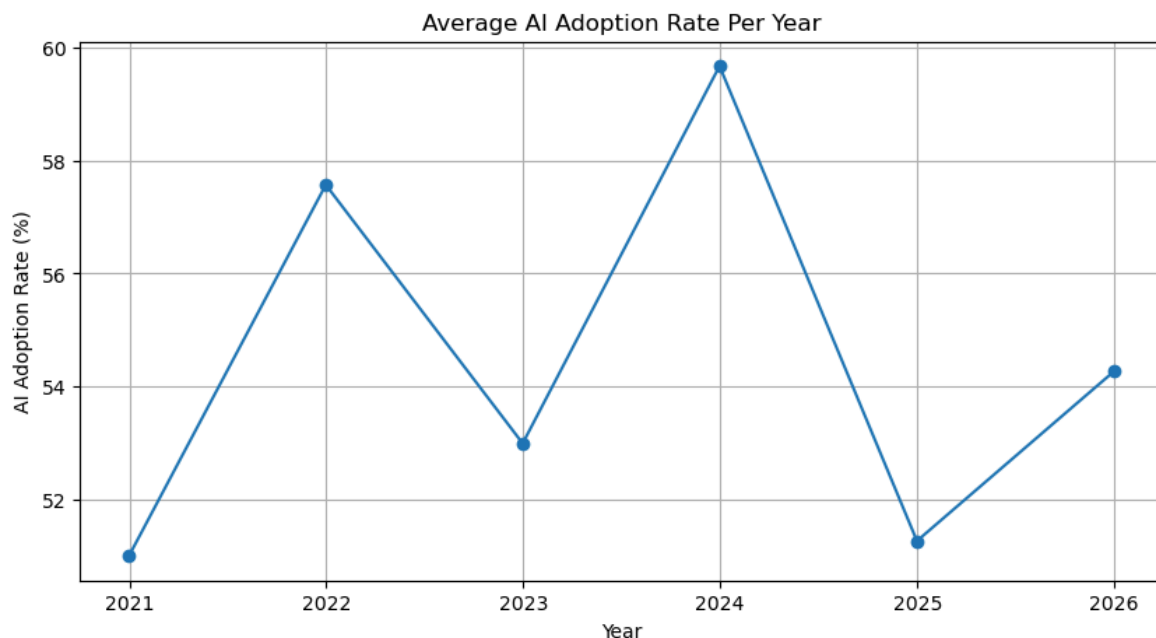
# Load the data
df = pd.read_csv('Global_AI_Content_Impact_Dataset.csv')

# Convert 'Year' to datetime
df['Year'] = pd.to_datetime(df['Year'], format='%Y', errors='coerce')

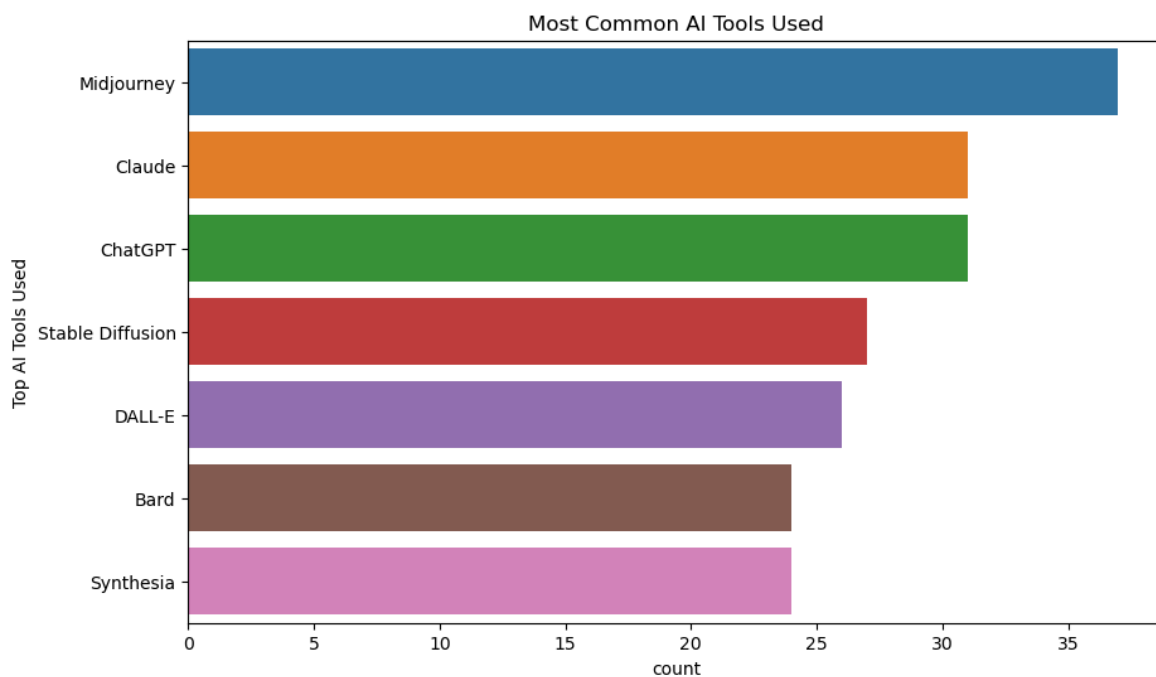
# Set 'Year' as index
df.set_index('Year', inplace=True)

# Resample by year and calculate mean AI Adoption Rate
yearly_adoption = df.resample('Y').mean(numeric_only=True)['AI Adoption Rate (%)']

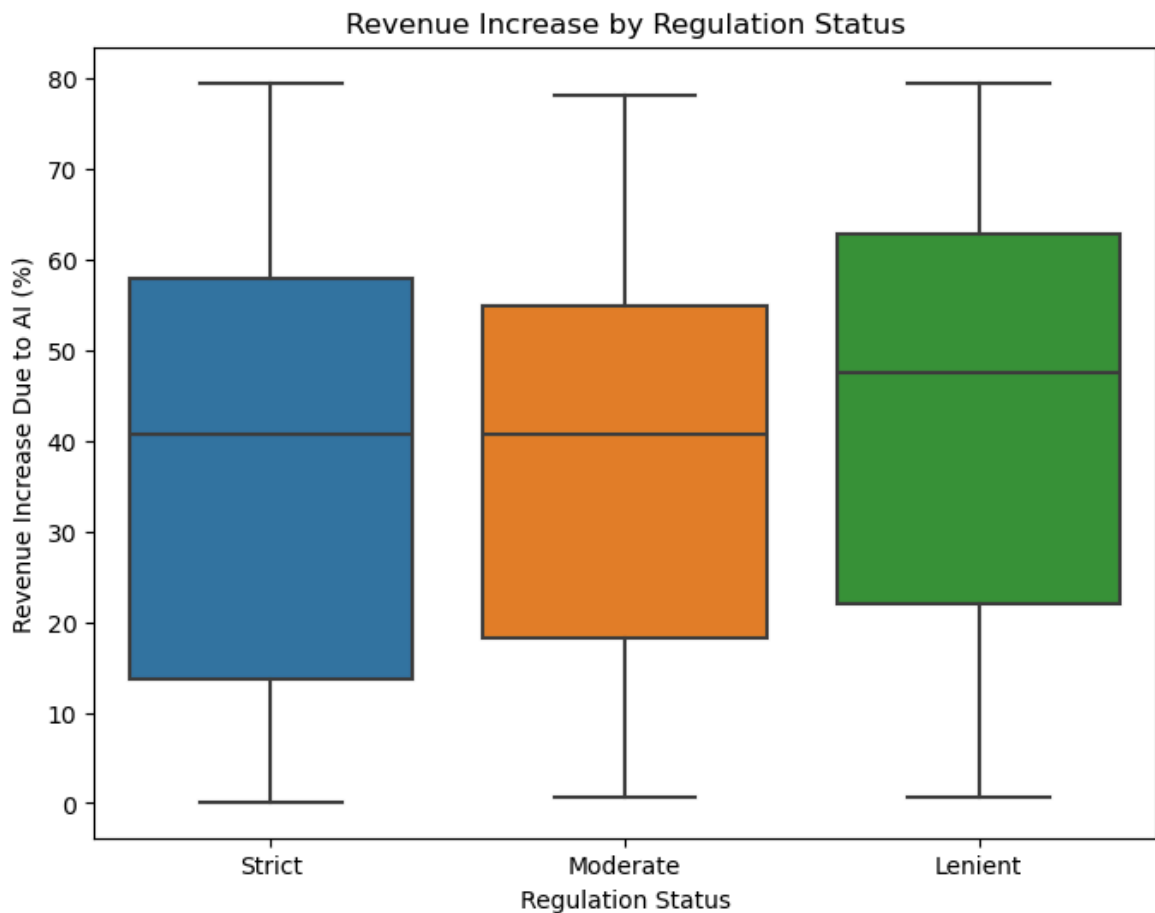
# Plot
plt.figure(figsize=(10, 5))
plt.plot(yearly_adoption.index, yearly_adoption, marker='o', linestyle='--')
plt.xlabel("Year")
plt.ylabel("AI Adoption Rate (%)")
plt.title("Average AI Adoption Rate Per Year")
plt.grid(True)
plt.show()
```



```
In [17]: plt.figure(figsize=(10, 6))
sns.countplot(y='Top AI Tools Used', data=df, order=df['Top AI Tools Used'].value
plt.title("Most Common AI Tools Used")
plt.show()
```



```
In [16]: import seaborn as sns
plt.figure(figsize=(8, 6))
sns.boxplot(data=df, x='Regulation Status', y='Revenue Increase Due to AI (%)')
plt.title("Revenue Increase by Regulation Status")
plt.xlabel("Regulation Status")
plt.ylabel("Revenue Increase Due to AI (%)")
plt.show()
```



```
In [19]: import pandas as pd
import matplotlib.pyplot as plt

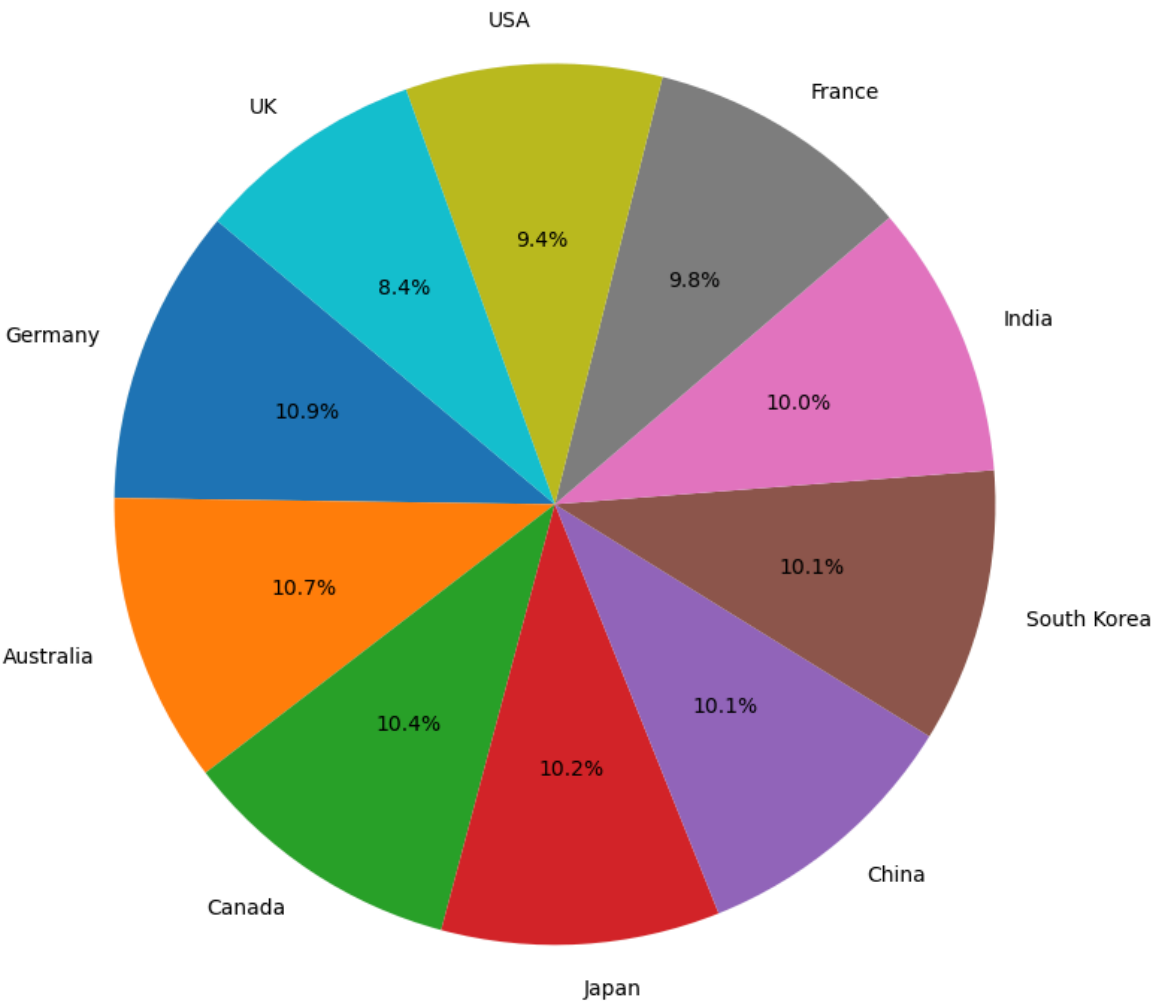
# Load the dataset
file_path = "Global_AI_Content_Impact_Dataset.csv" # Adjust path if needed
df = pd.read_csv(file_path)

# Group by country and calculate average consumer trust in AI
country_trust = df.groupby("Country")["Consumer Trust in AI (%)"].mean().sort_values(ascending=False)

# Select the top 10 countries
top_countries = country_trust.head(10)

# Create the pie chart
plt.figure(figsize=(8, 8))
plt.pie(top_countries, labels=top_countries.index, autopct='%1.1f%%', startangle=90)
plt.title("Top 10 Countries by Average Consumer Trust in AI")
plt.axis('equal') # Equal aspect ratio ensures the pie is drawn as a circle
plt.tight_layout()
plt.show()
```

Top 10 Countries by Average Consumer Trust in AI



Conclusion

The most profound impact revealed by this data is that AI adoption is not just transforming industries—it is reshaping the very structure of work and trust in technology. While companies see a measurable increase in revenue and efficiency, the societal cost is evident in job displacement and fluctuating consumer trust.

In [ ]: