CODE

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

```
file_path = "./Patreon.csv"
df = pd.read_csv(file_path)

df.head(10)
```

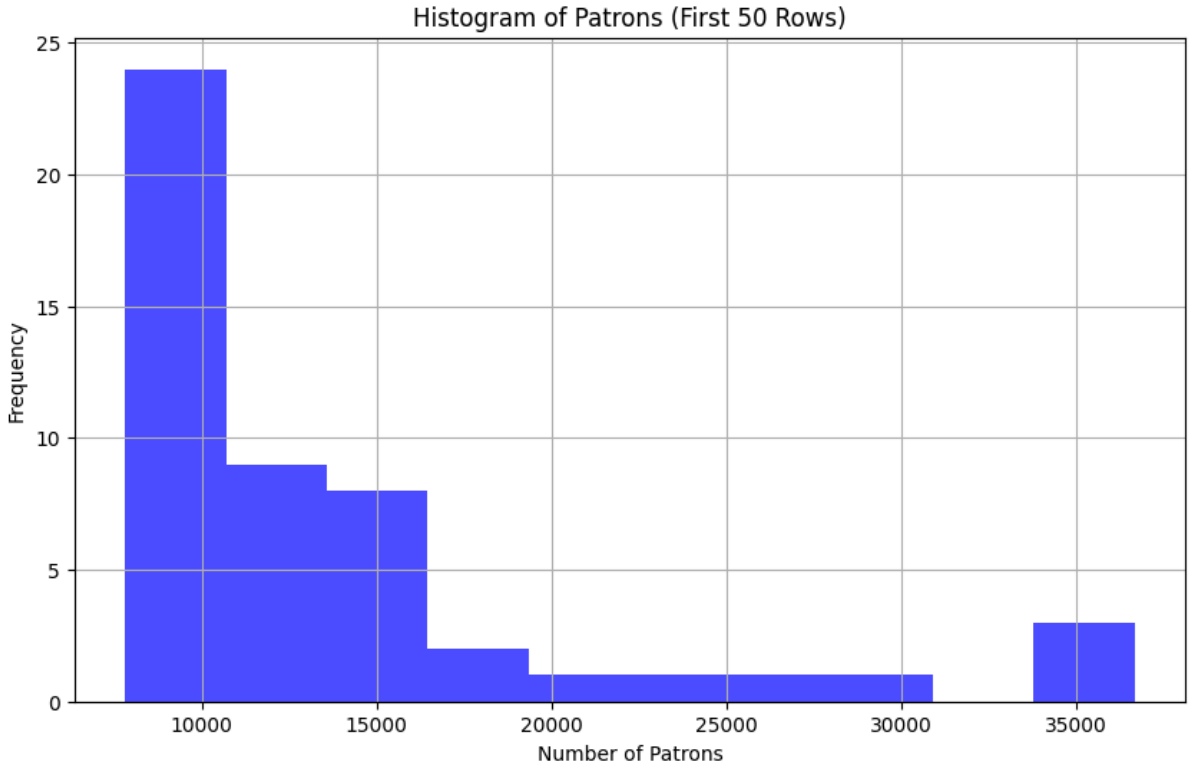
OUTPUT

	Rank	Creator_URL	Creator	Creator1	Patrons	DaysRunning	Launched
0	1	https://graphtreon.com/creator/TrueCrimeObsessed	True Crime Obsessed is creating podcasts of th...	True Crime Obsessed	36661	921	Jan-18
1	2	https://graphtreon.com/creator/chapotraphouse	Chapo Trap House is creating Chapo Trap House ...	Chapo Trap House	34983	1539	May-16
2	3	https://graphtreon.com/creator/jimcantswim	Jim C. Swim is creating Criminology and Psycho...	Jim C. Swim	33940	558	Jan-19
3	4	https://graphtreon.com/creator/YagamiYato	Yagami Yato is creating Vocal Artistry, ASMR, ...	Yagami Yato	28431	781	Jun-18
4	5	https://graphtreon.com/creator/mrshiu	è•è‹¥å…ƒèªª is creating knowledge (mrshiu)	è•è‹¥å…ƒèªª	26070	340	Sep-19
5	6	https://graphtreon.com/creator/summertimesaga	DarkCookie is creating Summertime Saga (summer...	DarkCookie	24445	1454	Aug-16
6	7	https://graphtreon.com/creator/humansofnewyork	Brandon Stanton is creating Humans of New York...	Brandon Stanton	20424	720	Aug-18
7	8	https://graphtreon.com/creator/theconsciouskid	The Conscious Kid is creating Parenting and Ed...	The Conscious Kid	16739	313	Oct-19
8	9	https://graphtreon.com/creator/tinymeatgang	TMG is creating the Tiny Meat Gang Podcast (ti...	TMG	16613	1030	Oct-17
9	10	https://graphtreon.com/creator/amandapalmer	Amanda Palmer is creating with no intermission...	Amanda Palmer	14969	1986	Mar-15

CODE

```
# 1. Histogram: Show distribution of 'Patrons' (First 50 rows)
plt.figure(figsize=(10, 6))
df_hist = df.head(50)  # Limit to first 50 rows
plt.hist(df_hist['Patrons'], bins=10, color='blue', alpha=0.7)
plt.title('Histogram of Patrons (First 50 Rows)')
plt.xlabel('Number of Patrons')
plt.ylabel('Frequency')
plt.grid()
plt.show()
```

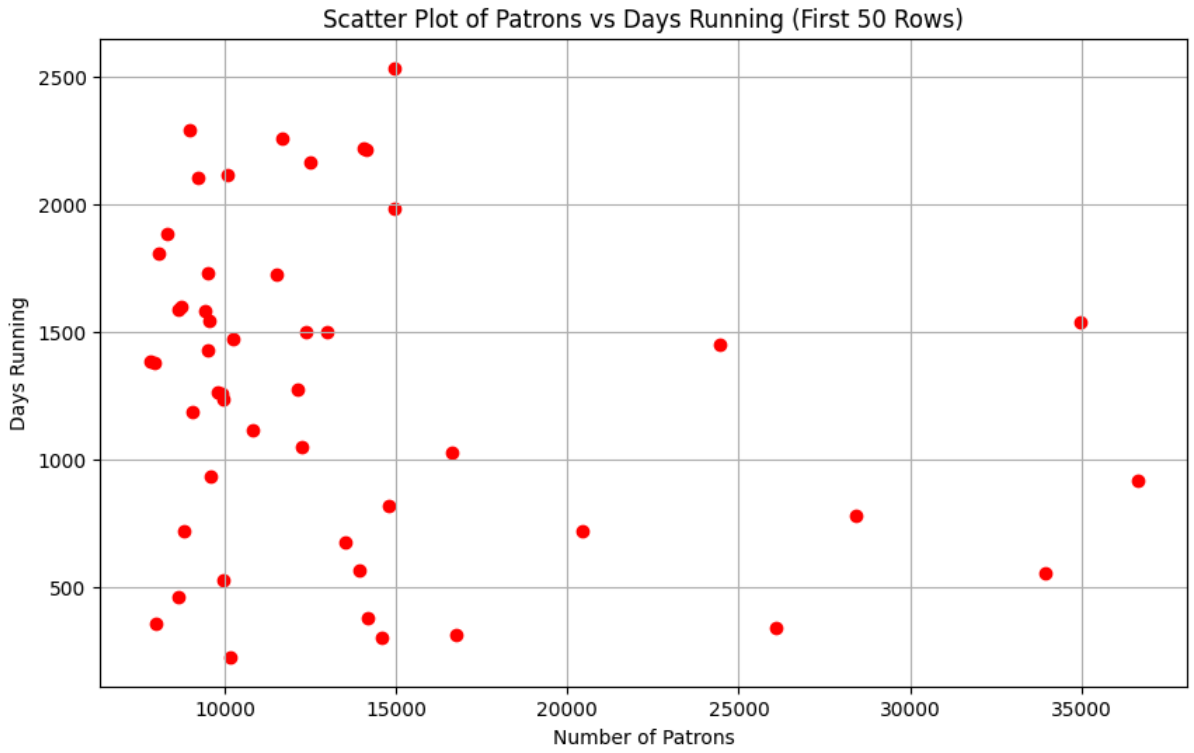
OUTPUT



CODE

```
#scatter
plt.figure(figsize=(10, 6))
df_scatter = df.head(50)  # Limit to first 50 rows
plt.scatter(df_scatter['Patrons'], df_scatter['DaysRunning'], color='red')
plt.title('Scatter Plot of Patrons vs Days Running (First 50 Rows)')
plt.xlabel('Number of Patrons')
plt.ylabel('Days Running')
plt.grid()
plt.show()
```

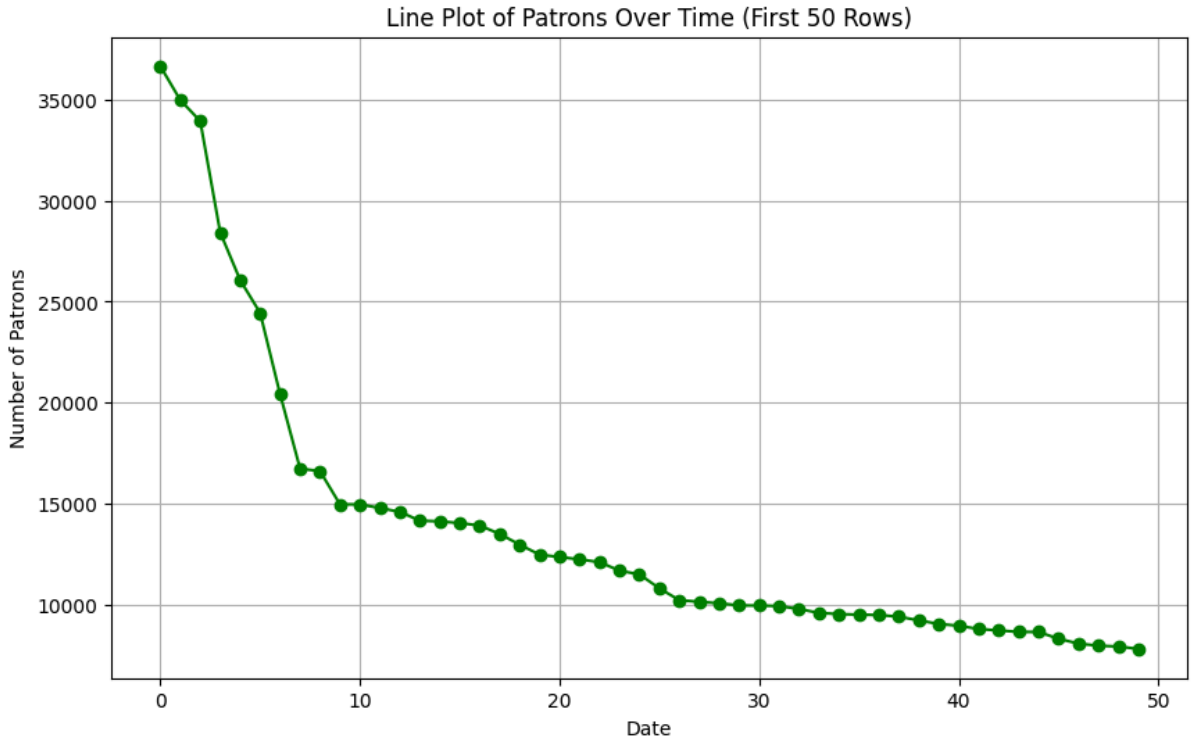
OUTPUT



CODE

```
#line
plt.figure(figsize=(10, 6))
df_line = df.head(50)  # Limit to first 50 rows
df_line['Patrons'].plot(color='green', marker='o')
plt.title('Line Plot of Patrons Over Time (First 50 Rows)')
plt.xlabel('Date')
plt.ylabel('Number of Patrons')
plt.grid()
plt.show()
```

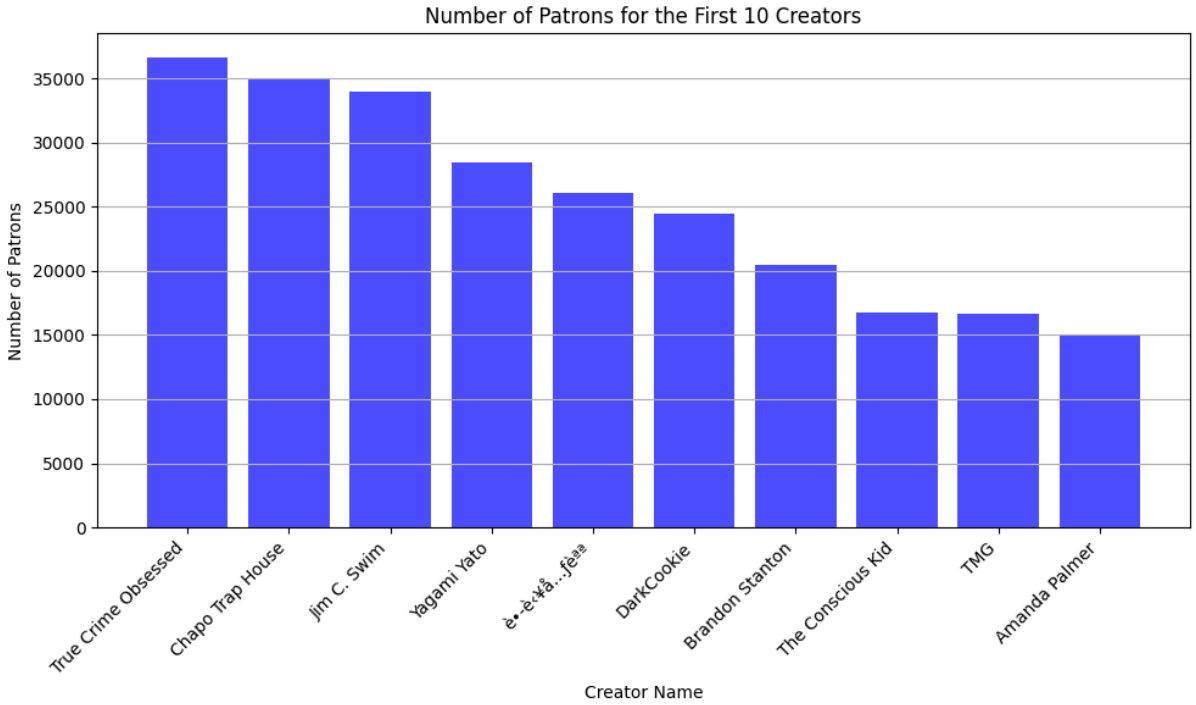
OUTPUT



CODE

```
#Bargraph for first 10 creators and their number of patrons
df_bar = df.head(10)

# Create a bar graph
plt.figure(figsize=(10, 6))
plt.bar(df_bar['Creator1'], df_bar['Patrons'], color='blue', alpha=0.7)
plt.title('Number of Patrons for the First 10 Creators')
plt.xlabel('Creator Name')
plt.ylabel('Number of Patrons')
plt.xticks(rotation=45, ha='right')  # Rotate the labels for better readability
plt.grid(axis='y')

# Show the plot
plt.tight_layout()  # Adjust the layout so everything fits
plt.show()
```

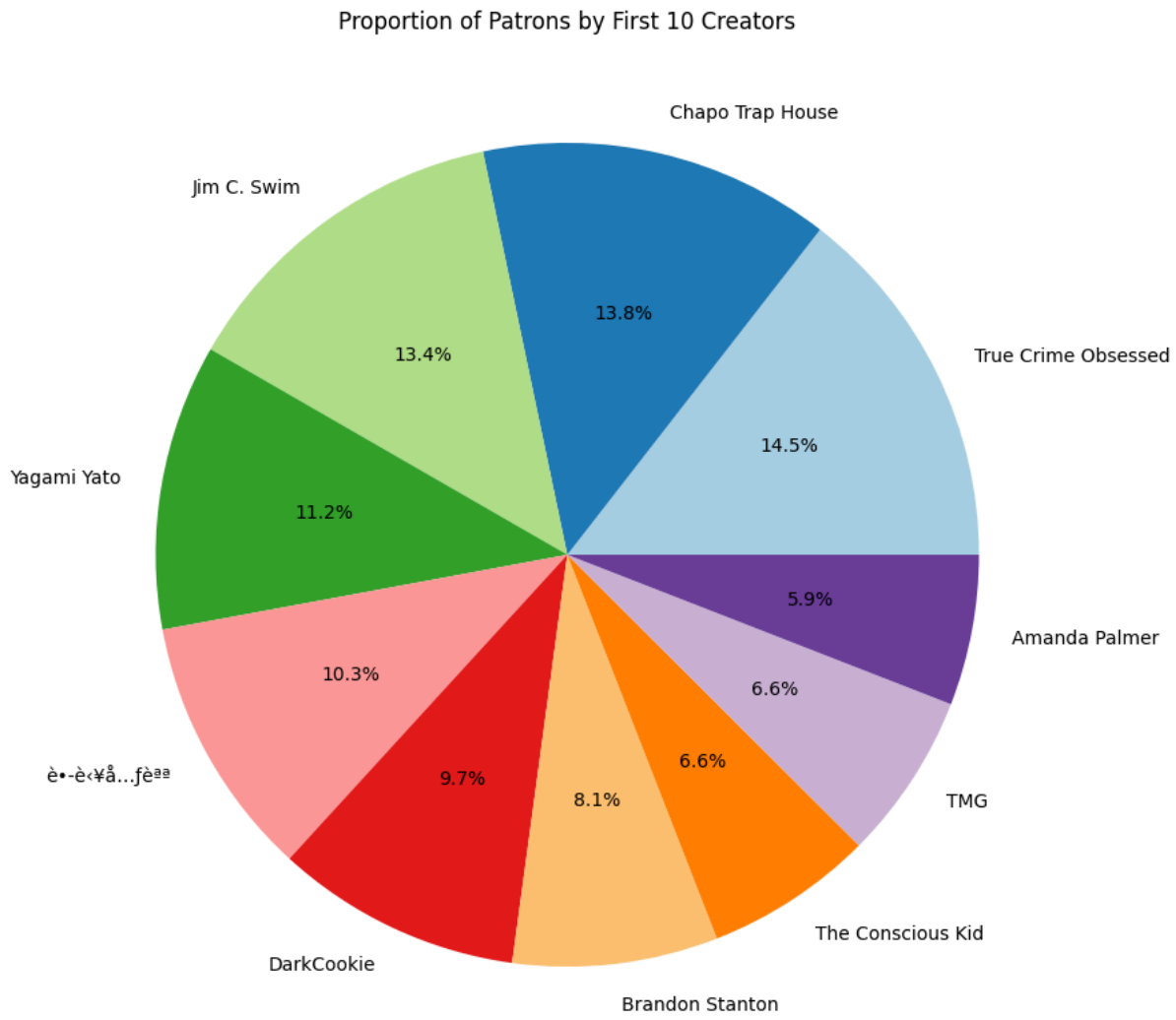
OUTPUT



CODE

```
# Select the first 10 creators from the DataFrame
df_first_10 = df.head(10)

# Create a pie chart using the number of patrons for the first 10 creators
plt.figure(figsize=(10, 10))
plt.pie(df_first_10['Patrons'],
        labels=df_first_10['Creator1'],
        autopct='%1.1f%%',
        colors=plt.cm.Paired.colors)

# Add title and display the plot
plt.title('Proportion of Patrons by First 10 Creators')
plt.show()
```

OUTPUT

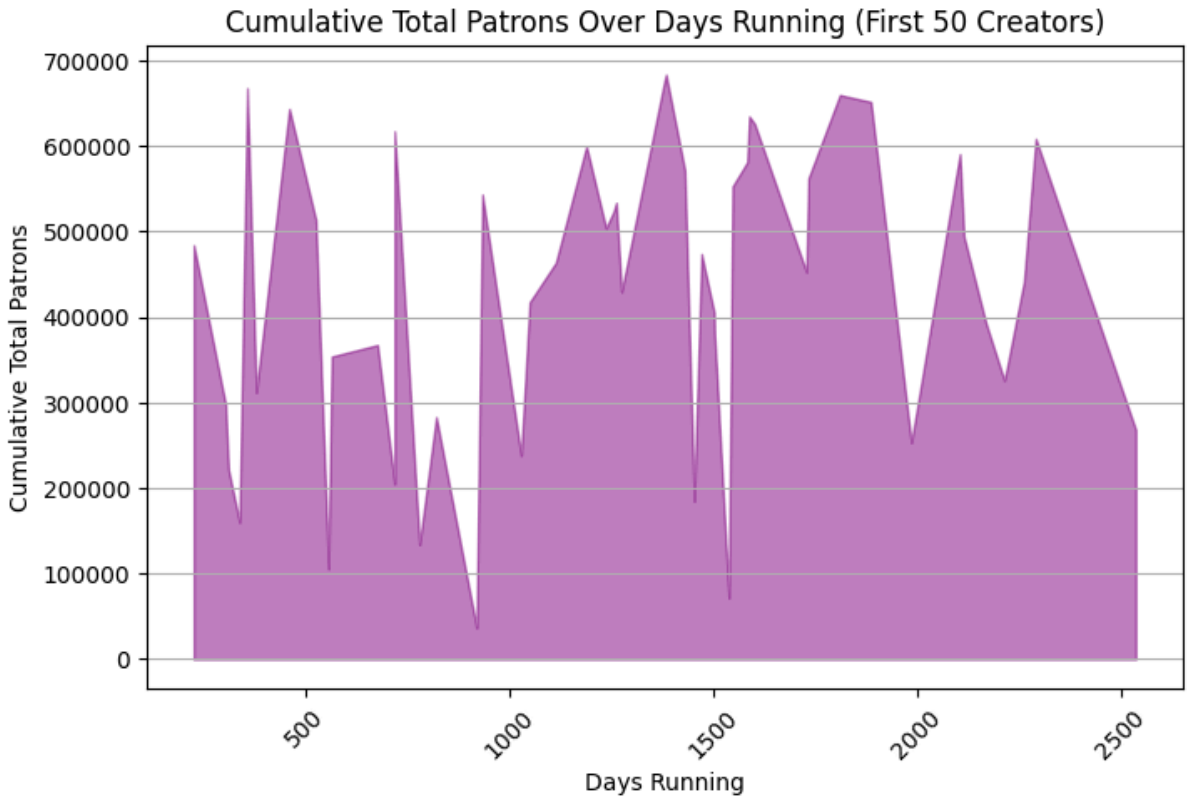


CODE

```
# Ensure the 'Launched' column is in datetime format
df['Launched'] = pd.to_datetime(df['Launched'], errors='coerce')

# Calculate cumulative patrons
df['Cumulative_Patrons'] = df['Patrons'].cumsum()

# Select the first 50 creators
df_first_200 = df.head(50)

# Create a new DataFrame with 'DaysRunning' and cumulative patrons
df_cumulative = df_first_200[['DaysRunning',
'Cumulative_Patrons']].drop_duplicates().sort_values('DaysRunning')
```

```
# Create an area plot
plt.figure(figsize=(8, 5))
plt.fill_between(df_cumulative['DaysRunning'],
df_cumulative['Cumulative_Patrons'], color='purple', alpha=0.5)
plt.title('Cumulative Total Patrons Over Days Running (First 50 Creators)')
plt.xlabel('Days Running')
plt.ylabel('Cumulative Total Patrons')
plt.xticks(rotation=45)  # Rotate x-axis labels for better readability
plt.grid(axis='y')

# Show the plot
plt.show()
```

OUTPUT

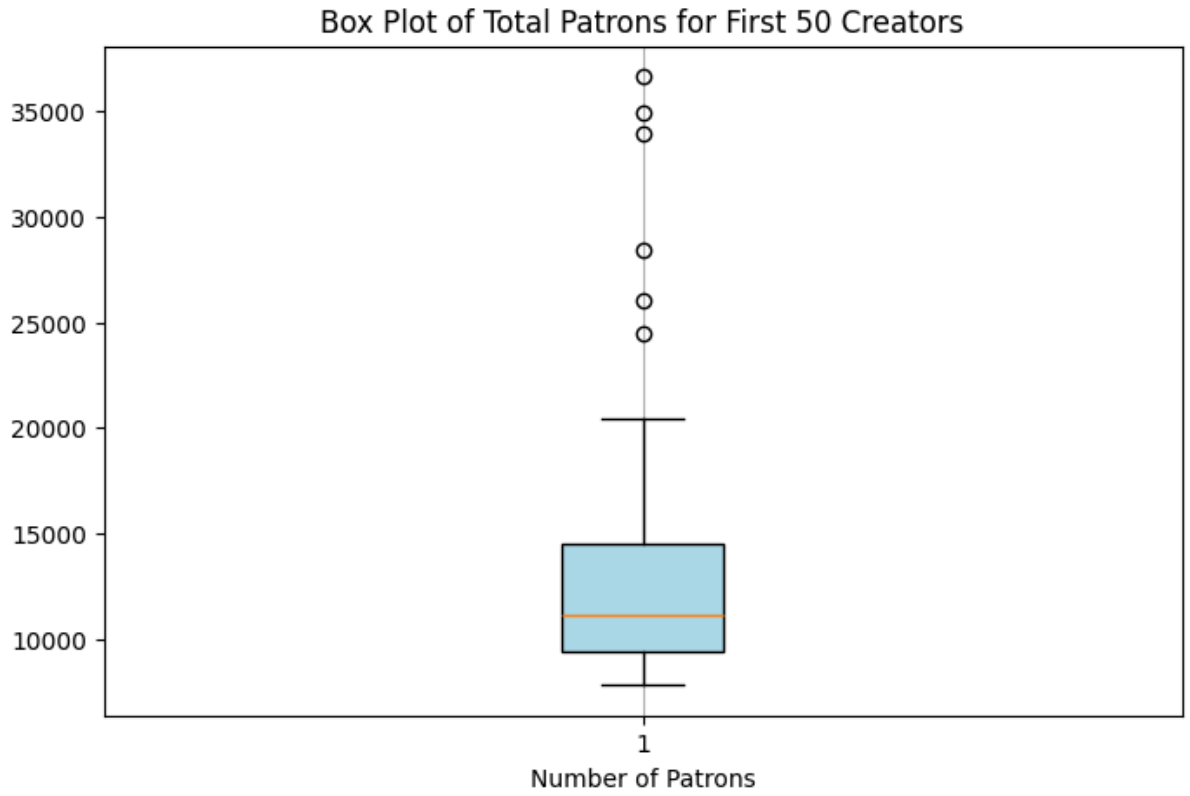


CODE

```
# Select the first 50 creators
df_first_50 = df.head(50)

# Create a box plot for total patrons
plt.figure(figsize=(8, 5))
```

```
plt.boxplot(df_first_50['Patrons'], vert=True, patch_artist=True,
boxprops=dict(facecolor='lightblue'))
plt.title('Box Plot of Total Patrons for First 50 Creators')
plt.xlabel('Number of Patrons')
plt.grid(axis='x')

# Show the plot
plt.show()
```

OUTPUT



CODE

```
df_limited = df.head(10)

# Select relevant numeric columns: Rank, Patrons, DaysRunning
numeric_columns = df_limited[['Rank', 'Patrons', 'DaysRunning']]

# Create a pair plot
sns.pairplot(numeric_columns)
```

```
plt.suptitle('Pair Plot of Rank, Patrons, and Days Running (First 10 Creators)',
y=1.02)
plt.show()
```

OUTPUT