Manhwa Analysis

This is a mini Python project I created to sharpen my data analysis skills.
The dataset is manually compiled based on action, murim, and hunter-themed manhwa I have personally read. Each entry was documented and structured into a dataset format suitable for analysis.

The goal of this project is to explore the dataset through statistics and visualizations, uncover interesting insights about high-performing titles, platform preferences, and more.

1. Import Libraries

```
# Basic data handling
import pandas as pd
import numpy as np

# Visualization
import matplotlib.pyplot as plt
import seaborn as sns

# Plot styling
sns.set_theme(style='whitegrid', palette='pastel')
%matplotlib inline
```

2. Load Dataset

```
# Load dataset
data_path = "Manhwa Cleaned.csv"
data = pd.read_csv(data_path, encoding='utf-8-sig')

# Check the number of rows and columns
data.shape  # Output format: (rows, columns)
```

```
(45, 8)
```

3. Data Cleaning

```
# Normalize column names: lowercase, no spaces
data.columns = data.columns.str.strip().str.lower().str.replace(' ',
'_')

# Convert 'readers' to numeric (remove commas if necessary)
data['readers'] = data['readers'].astype(str).str.replace(',',
```

```
'').astype(float)

# Optional: convert chapters to numeric if needed
data['chapters'] = pd.to_numeric(data['chapters'], errors='coerce')

# Check for duplicates
duplicate_count = data.duplicated().sum()
print(f"Number of duplicate rows: {duplicate_count}")

# Check for missing values
print("Missing values per column:")
print(data.isnull().sum())
```

```
Number of duplicate rows: 0
Missing values per column:
title           0
author          0
rating          0
readers         0
release_year    0
status          0
platform        0
chapters        0
dtype: int64
```

4. Data Preview

```
print(data.columns.tolist())
```

```
['title', 'author', 'rating', 'readers', 'release_year', 'status',
'platform', 'chapters']
```

```
# Display the first 5 rows of the dataset
data.head()
```

```
                                    title          author  rating  \
0         I'm going to destroy this country           SAN.G      10
1                      Myst, might, mayhem   Kim Tae-Hyung      10
2                        Best teacher baek      Ganjjajang      10
3                            Solo leveling         Chugong      10
4  The demonic cult leader is too reluctant  Kim Hyun-Young       9

        readers  release_year    status   platform  chapters
0     3,852,000          2025   Ongoing  KakaoPage        33
1     2,000,000          2024   Ongoing    Webtoon        71
2    27,600,000          2021   Ongoing    Webtoon       117
3 5,500,000,000          2018  Complete  KakaoPage       200
4       585,846          2024   Ongoing    Webtoon        21
```

5. Data Description

Below is a brief explanation of each column in the dataset:

1. **tittle** – The title of the manhwa (comic series).
2. **author** – The creator or writer of the manhwa.
3. **rating** – The average reader rating on the original platform.
4. **readers** – The total number of readers recorded on the original publishing platform.
5. **release_year** – The year the manhwa was first published or serialized.
6. **status** – Indicates whether the manhwa is ongoing or completed.
7. **platform** – The digital platform or publisher where the manhwa was originally released (e.g., Webtoon, KakaoPage).
8. **chapters** – Total number of chapters published.

6. Data Info & Descriptive Statistics

```
# Display dataset structure and data types
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 45 entries, 0 to 44
Data columns (total 8 columns):
 #   Column        Non-Null Count  Dtype
---  ------        --------------  -----
 0   title         45 non-null     object
 1   author        45 non-null     object
 2   rating        45 non-null     float64
 3   readers       45 non-null     float64
 4   release_year  45 non-null     int64
 5   status        45 non-null     object
 6   platform      45 non-null     object
 7   chapters      45 non-null     int64
dtypes: float64(2), int64(2), object(4)
memory usage: 2.9+ KB
```

7. Explatory Data Analysis (EDA)

```
# Display summary statistics for numerical features
pd.options.display.float_format = '{:,.0f}'.format
data[['rating', 'readers', 'chapters']].describe()
```

```
       rating       readers  chapters
count      45            45        45
mean       10   209,668,421       139
std         0   823,016,761        83
```

```
min          9       585,846         21
25%         10     4,000,000         80
50%         10    27,600,000        124
75%         10    88,478,000        200
max         10 5,500,000,000        411
```

```
# Top 10 Manhwa by Rating
top_rating = data.sort_values(by='rating', ascending=False).head(10)
top_rating[['title', 'rating']].style.format({'rating': '{:.1f}'})
```

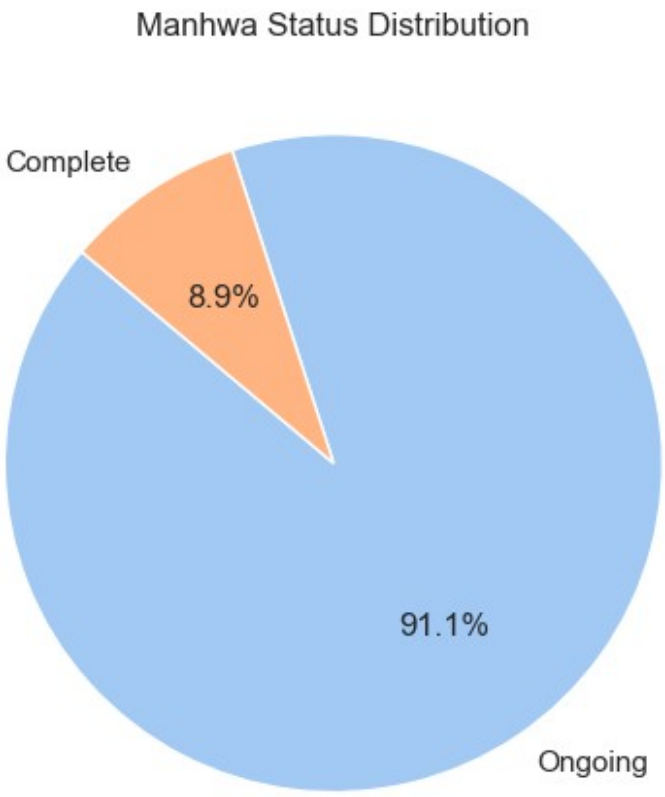
```
<pandas.io.formats.style.Styler at 0x18497198d70>
```

```
# Top 10 Manhwa by Readers
pd.options.display.float_format = '{:,.0f}'.format
top_readers = data.sort_values(by='readers', ascending=False).head(10)
top_readers[['title', 'readers']]
```

```
                           title       readers
3                   Solo leveling 5,500,000,000
39          Solo max-level newbie   901,333,000
27  Omniscient Reader's Viewpoint   464,700,000
26                       Eleceed   396,000,000
19         Ranker who lives twice   330,000,000
22           Poison-eating healer   271,900,000
37           Mercenary Enrollment   235,000,000
29  The greatest estate developer   166,900,000
40       SSS-Class Suicide Hunter   120,000,000
44   Regressor instruction manual   100,000,000
```

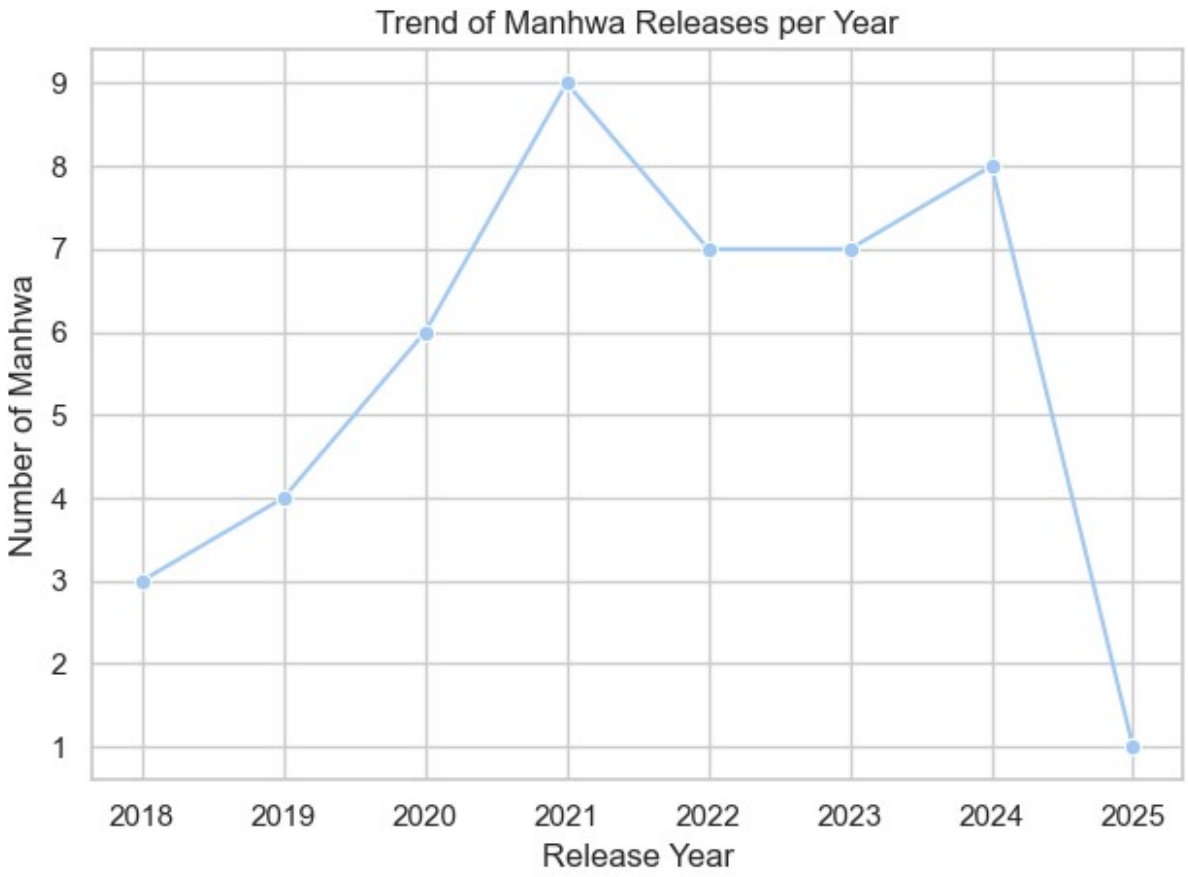
```
# Status Distribution (Pie Chart)
data['status'].value_counts().plot.pie(
    autopct='%1.1f%%',
    startangle=140,
    colors=sns.color_palette('pastel')
)

plt.title("Manhwa Status Distribution")
plt.ylabel('')
plt.tight_layout()
plt.show()
```



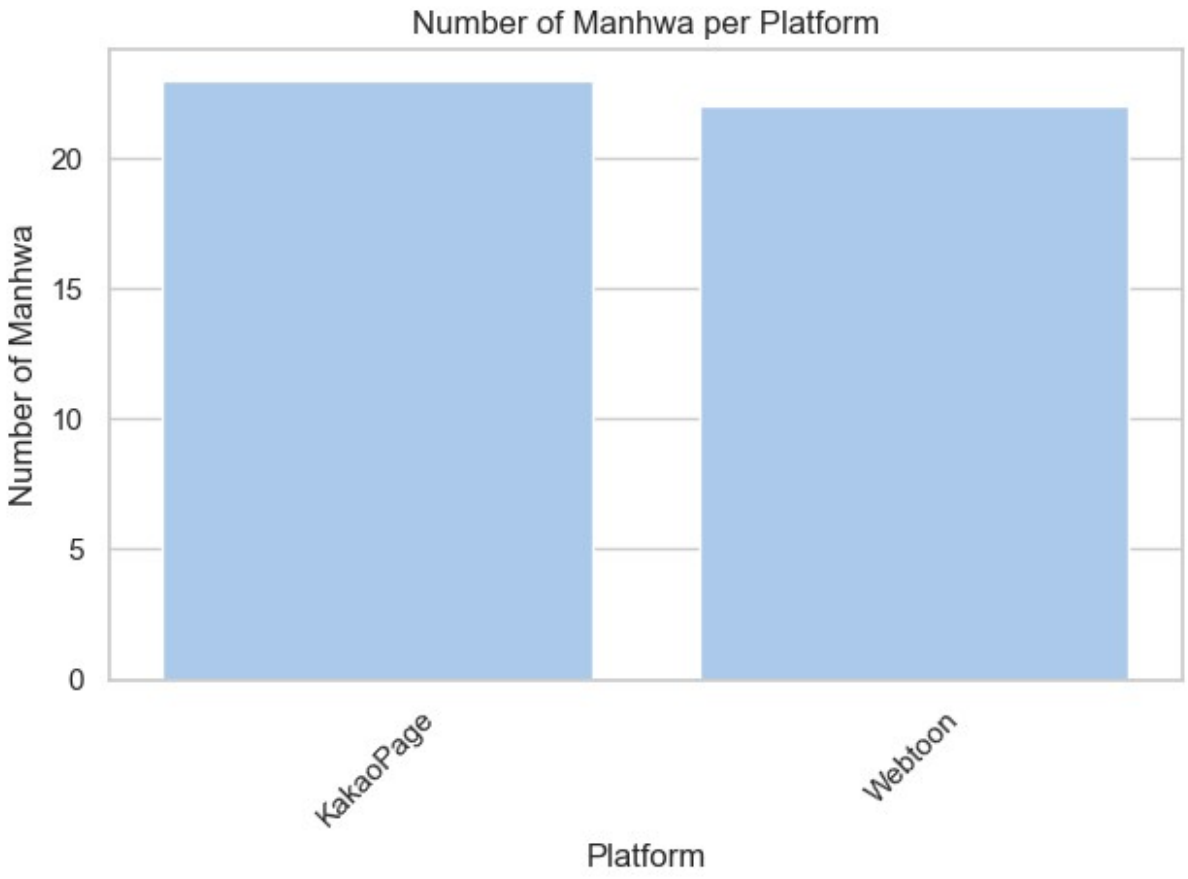

```
# Release Trend by Year
release_trend = data['release_year'].value_counts().sort_index()
sns.lineplot(x=release_trend.index, y=release_trend.values,
marker='o')

plt.title("Trend of Manhwa Releases per Year")
plt.xlabel("Release Year")
plt.ylabel("Number of Manhwa")
plt.tight_layout()
plt.show()
```



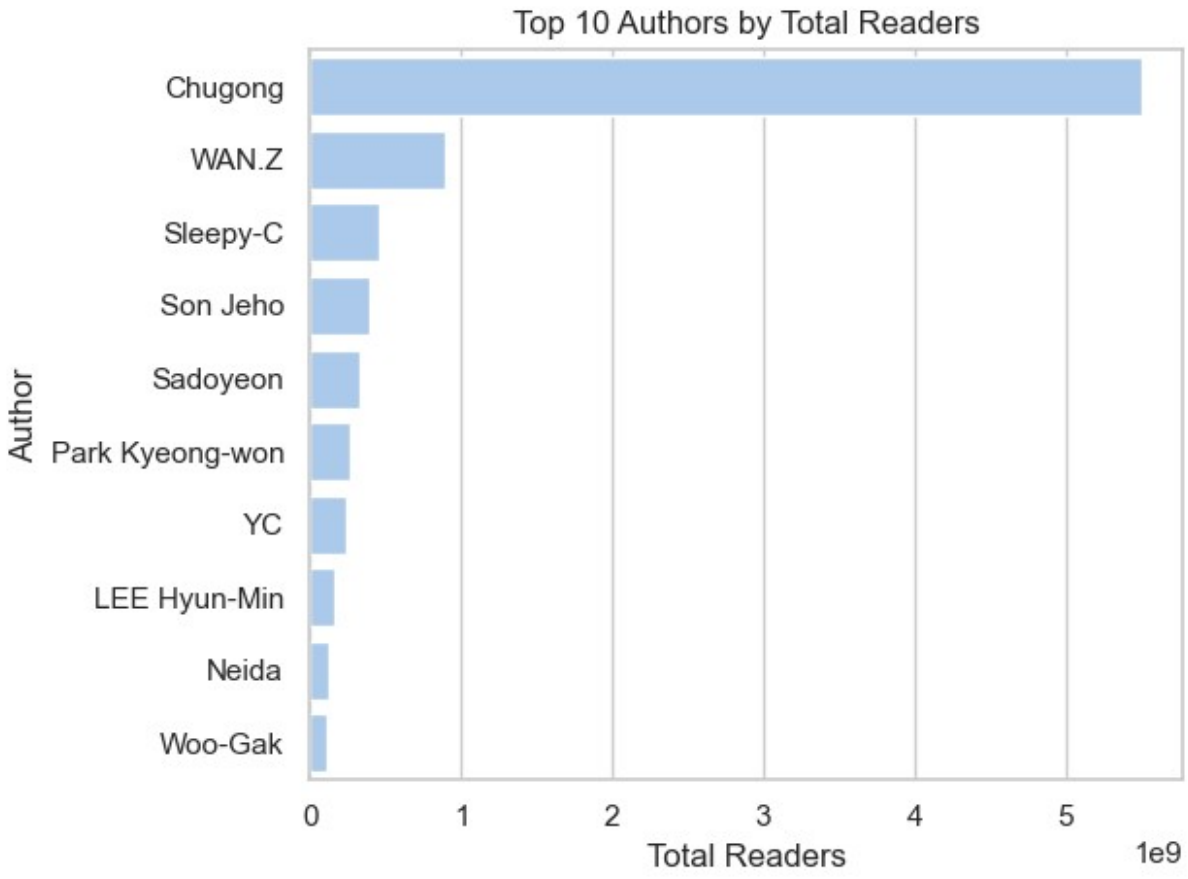

```
# Platform Popularity
platform_counts = data['platform'].value_counts()
sns.barplot(x=platform_counts.index, y=platform_counts.values)

plt.title("Number of Manhwa per Platform")
plt.xlabel("Platform")
plt.ylabel("Number of Manhwa")
plt.xticks(rotation=45)
plt.tight_layout()
plt.show()
```




```
# Top Authors by Total Readers
top_authors_readers = data.groupby('author')
['readers'].sum().sort_values(ascending=False).head(10)
sns.barplot(x=top_authors_readers.values, y=top_authors_readers.index)

plt.title("Top 10 Authors by Total Readers")
plt.xlabel("Total Readers")
plt.ylabel("Author")
plt.tight_layout()
plt.show()
```



8. Key Insights

- Most manhwas in this dataset have excellent ratings, with an average close to 9.7 out of 10.
- Titles like *Solo Leveling* and *Omniscient Reader's Viewpoint* are not only top-rated but also among the most read.
- The majority of manhwas are published on Webtoon and KakaoPage, indicating dominance of these platforms.
- The trend shows a rise in action/murim-themed manhwa after 2020, reflecting growing global popularity.
- Authors such as Chugong and San.G are repeatedly present in top-performing titles.

7. Personal Reflection

This mini project was my personal initiative to practice data analysis using a dataset I created based on manhwas I enjoy. Although the data is limited and manually compiled, the process helped me reinforce my skills in Python, data visualization, and storytelling.

Through this exploration, I learned not only about my data preferences but also how to structure a full EDA workflow—from loading, cleaning, exploring, to deriving insights.

I look forward to refining this project further, maybe with a larger dataset and more advanced analytics. For now, I'm proud that this small step reflects my commitment to continuous learning.