



Executive Summary – Movie Data Analysis

This project focused on analyzing a dataset of **9,827 movies** containing details such as release date, genres, popularity, vote counts, and ratings. The analysis followed a structured approach including **data cleaning, transformation, and visualization** to uncover meaningful insights.

♦ Data Preparation & Cleaning

- Converted **Release_Date** into **year values** to track trends over time.
- Removed less useful columns such as *Overview* and *Poster URL* for focused analysis.
- **Vote_Average** values were categorized into four groups: *Popular*, *Average*, *Below Average*, and *Not Popular* to simplify interpretation.
- Split and restructured **multi-genre movies**, enabling better genre-level insights.
- Addressed outliers, particularly in the **Popularity** column, to improve visualization accuracy.

♦ Key Insights from Visualizations

- **Genre Popularity:** *Drama* dominated as the most frequent genre, appearing in more than **14% of all movies**, followed by *Comedy* and *Thriller*.
- **Highest Rated Movies:** Most titles clustered within *Average* and *Popular* categories. The standout was *Kung Fu Master Huo Yuanjia* with a **perfect rating of 10/10**.
- **Popularity Leaders:**
 - *Spider-Man: No Way Home* was identified as the **most popular movie**, reflecting global audience attraction to *Action*, *Adventure*, and *Science Fiction*.
 - Movies like *Threads* and *The United States vs. Billie Holiday* were among the least popular despite being critically recognized genres like *Drama* and *History*.
- **Vote Count:** Movies like *Spider-Man: No Way Home* and *Encanto* also showed **very high vote counts**, indicating both popularity and engagement from audiences.
- **Trends Over Time:** The number of movie releases has shown a **steady increase over the years**, aligning with the rise of streaming platforms and broader global

distribution.

◆ Overall Conclusion

The analysis demonstrates that the movie industry is **dominated by drama and action genres**, with blockbusters significantly influencing popularity metrics. While some films achieve high ratings despite limited popularity, mainstream appeal tends to be driven by **action-packed, franchise-based, and family-oriented films**. The study also highlights how **audience engagement (votes) and popularity are interlinked**, but not always directly tied to critical ratings.