

Movie Genre Trends and Ratings Analysis (2005-2025)

This project explores how movie genres have evolved between 2005 and mid 2025 using IMDb data.

Tools: Pandas, NumPy, Matplotlib, Seaborn

Goals:

- Identify which genres tend to have the highest-rated movies overall
- Determine how has genre popularity shifted over time
- Identify which genres get the most audience engagement
- Identify the trend of ratings over time
- Determine the 3 highest-rated movies per the 5 most popular Genres

Dataset information:

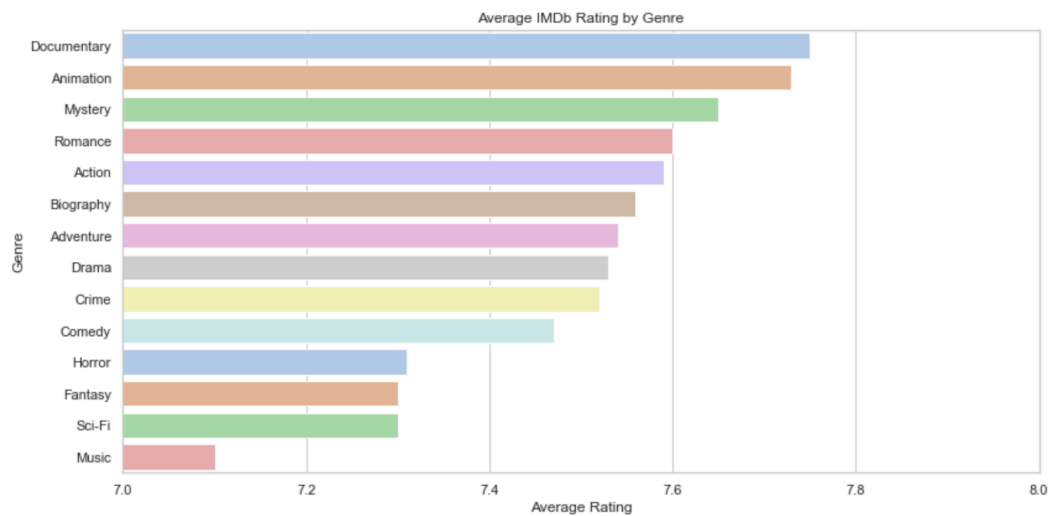
The dataset used in this project was originally sourced from Kaggle (now unavailable). It contains information about movies, TV series, and mini-series, including their genres, ratings, and release years. Each row represents a unique title and includes the following columns:

- id: IMDb ID of the title (e.g., tt1234567)
- title: Name of the movie or series
- type: Type of media (e.g., movie, tvSeries, tvMiniSeries)
- genres: A comma-separated string of genres (e.g., Action,Drama)
- averageRating: IMDb user rating (float, from 0 to 10)
- numVotes: Total number of user votes
- releaseYear: Year the title was released

Note: The original dataset is no longer publicly available on Kaggle. However, a local version was retained for analysis and exploration.

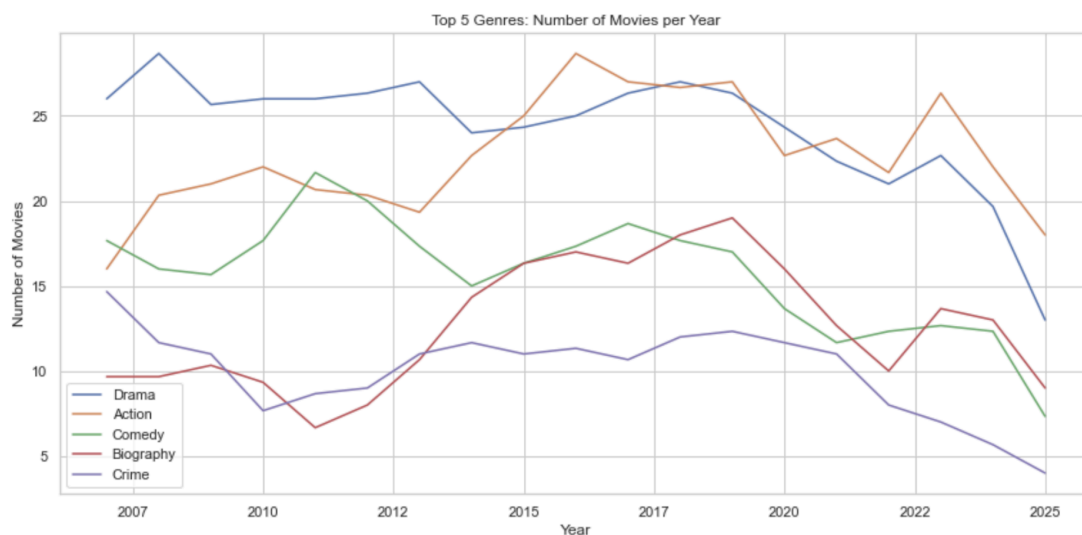
Analysis:

1. Identify which genres tend to have the highest-rated movies overall



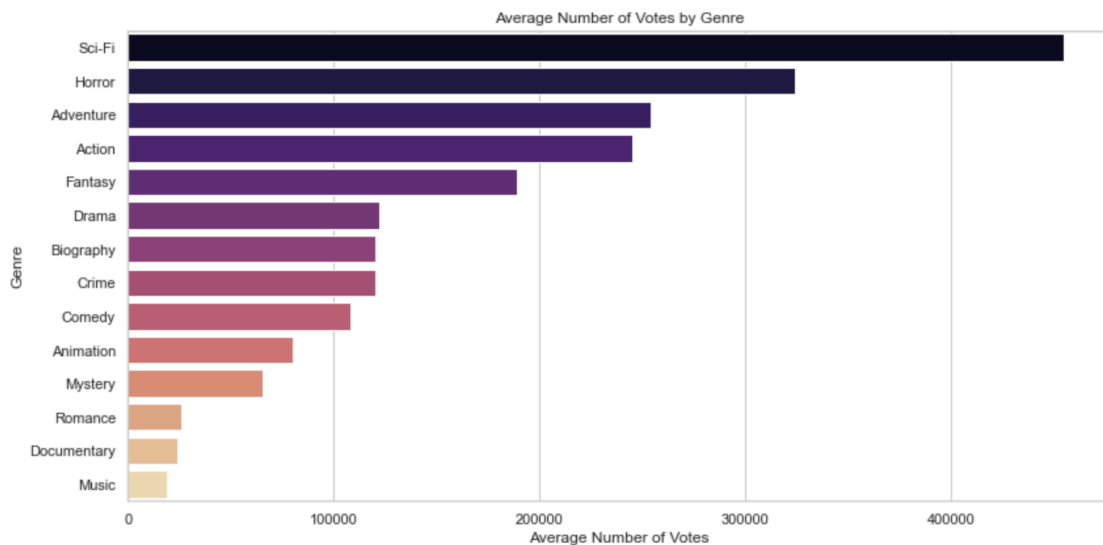
Genres such as Documentary, Animation, and Mystery consistently have the highest average IMDb ratings. These genres likely benefit from strong storytelling, factual content, and niche audiences that rate them favorably.

2. Determine how has genre popularity shifted over time



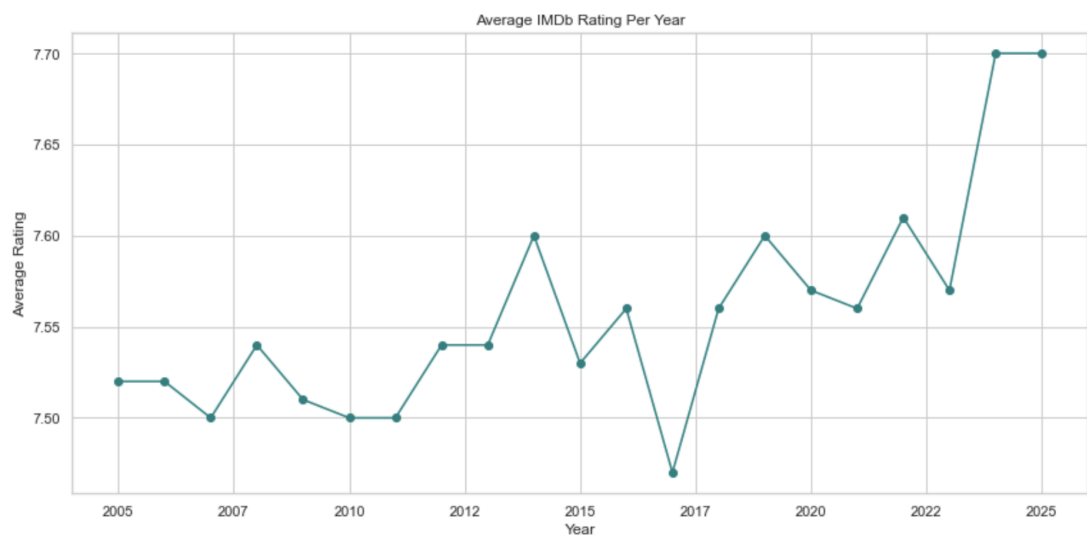
Over the past two decades, Drama and Action have dominated movie production volume. Biography saw a notable rise in popularity until 2018, likely reflecting audience interest in real-life stories, but then declined. Comedy and Crime genres appear to be losing popularity, which may reflect shifts in consumer interest or market focus.

3. Identify which genres get the most audience engagement



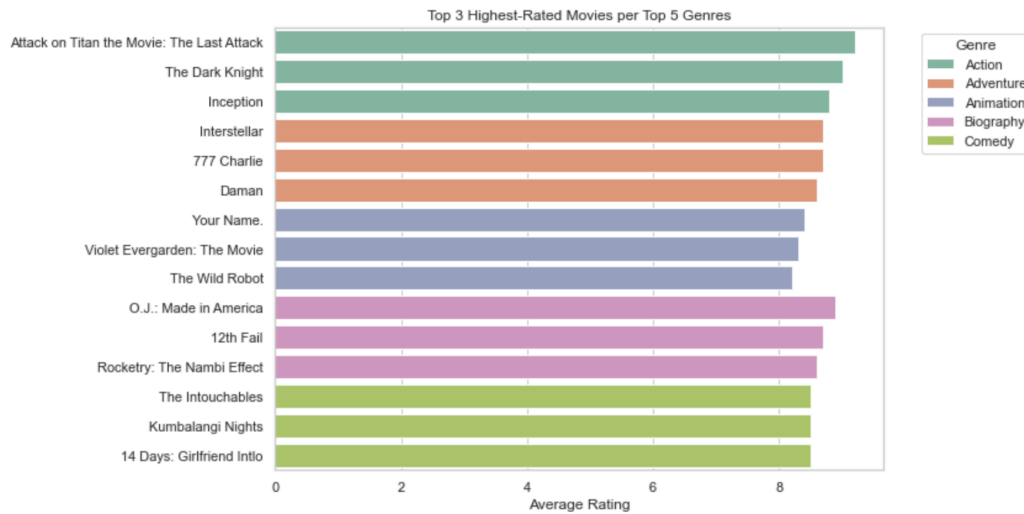
Genres such as Sci-Fi, Horror, and Adventure receive the most audience engagement, indicated by the highest average number of votes. These genres likely attract broader audiences and generate stronger online activity.

4. Identify the trend of ratings over time



Average IMDb ratings have remained relatively stable over the years, with minor fluctuations. This suggests a consistent rating behavior among users, regardless of changes in genre popularity or production trends.

5. Determine the 3 highest-rated movies per the 5 most popular Genres



Within the most popular genres, standout titles maintain exceptionally high ratings. This reflects that even in widely produced genres like Adventure or Action, top-tier storytelling continues to resonate with audiences.

Conclusion:

This analysis demonstrates that while genre popularity evolves over time, high audience engagement and strong ratings remain concentrated in a few key genres. By identifying top-performing genres and trends, filmmakers and analysts can better align production strategies with audience preferences.