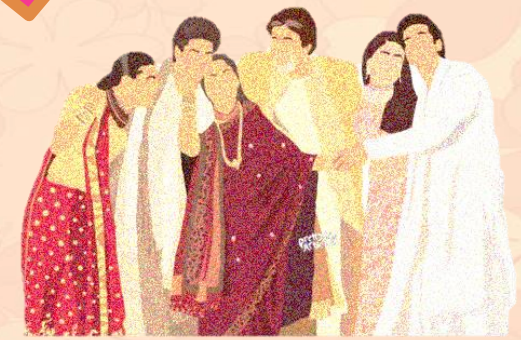
BOLLYWOOD MOVIES ANALYSIS



Directed and Produced by:

Nivi Bhagat Munjal

CONTENTS

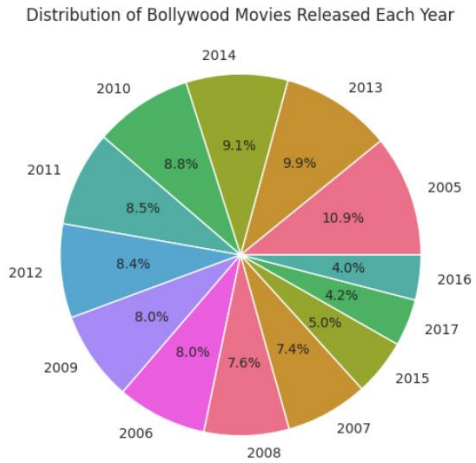
- Motivation for Data Analysis
- Dataset Background
- Data Analysis
- Conclusions
- Future Analysis

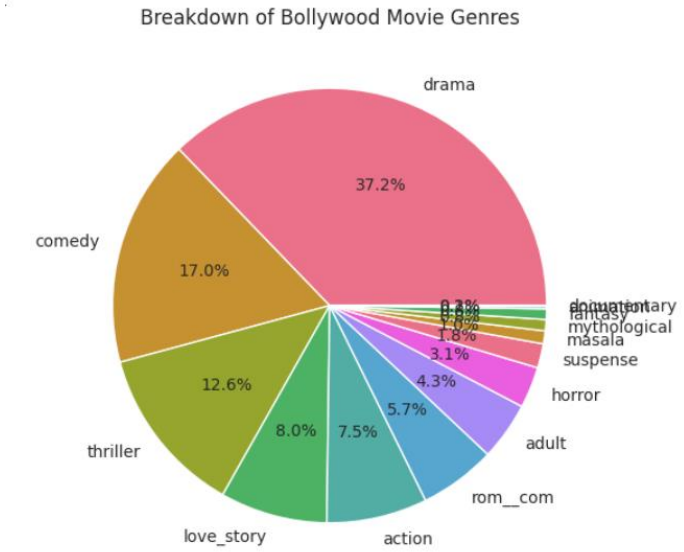
MOTIVATION FOR DATA ANALYSIS

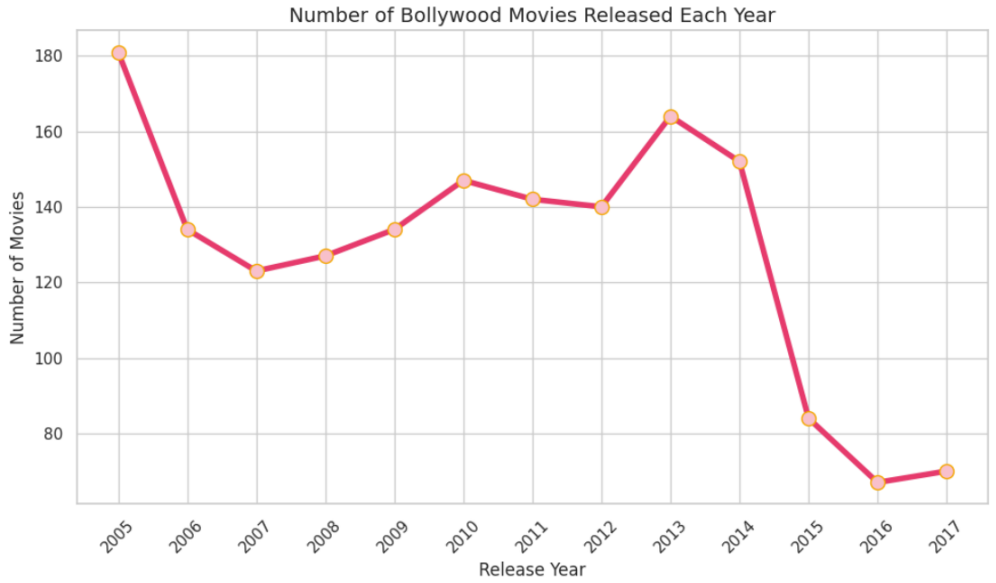
- Gather **Insights** on Bollywood Hindi Movie Industry Trends over the Years
- Answer **Relevant Questions** about the Film Industry
- Provide Direction to Relevant **Stakeholders**
  - Types of Movies that should be Invested in
  - Which Projects should High Budget be Allocated to
- Discoveries of **New Opportunities** and **Future Growth** in this Film Industry
  - Potential Actors/Actresses that Stakeholders should consider
  - Storylines that could be represented through Future Films
  - Maintaining Old Talent and Cultivating New Talent of Actors, Directors, Music Producers

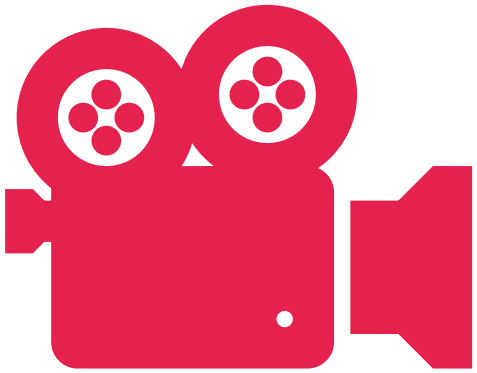
DATASET BACKGROUND

- **1666** Bollywood Hindi Movies from 2005-2017
- **741** Distinct Lead Star Actors/Actresses
- **1026** Distinct Directors
- **14** Genres Represented
- **9** Categories of Box Office Collections







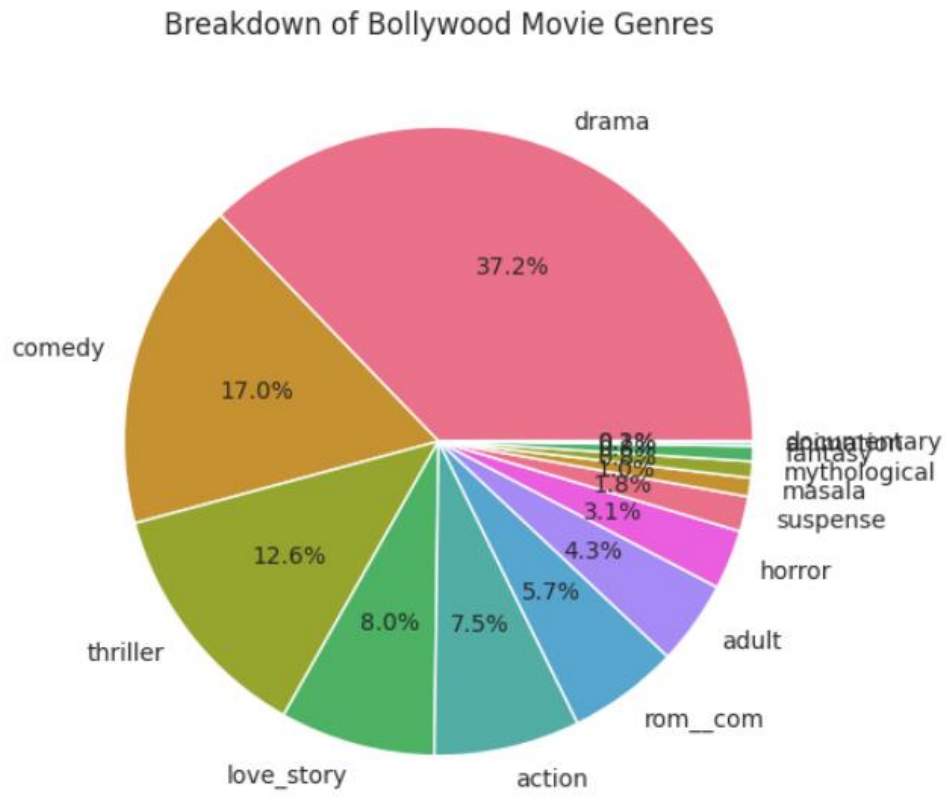


GENRE ANALYSIS

The Impact of Genre on Bollywood Movies

GENRE ANALYSIS

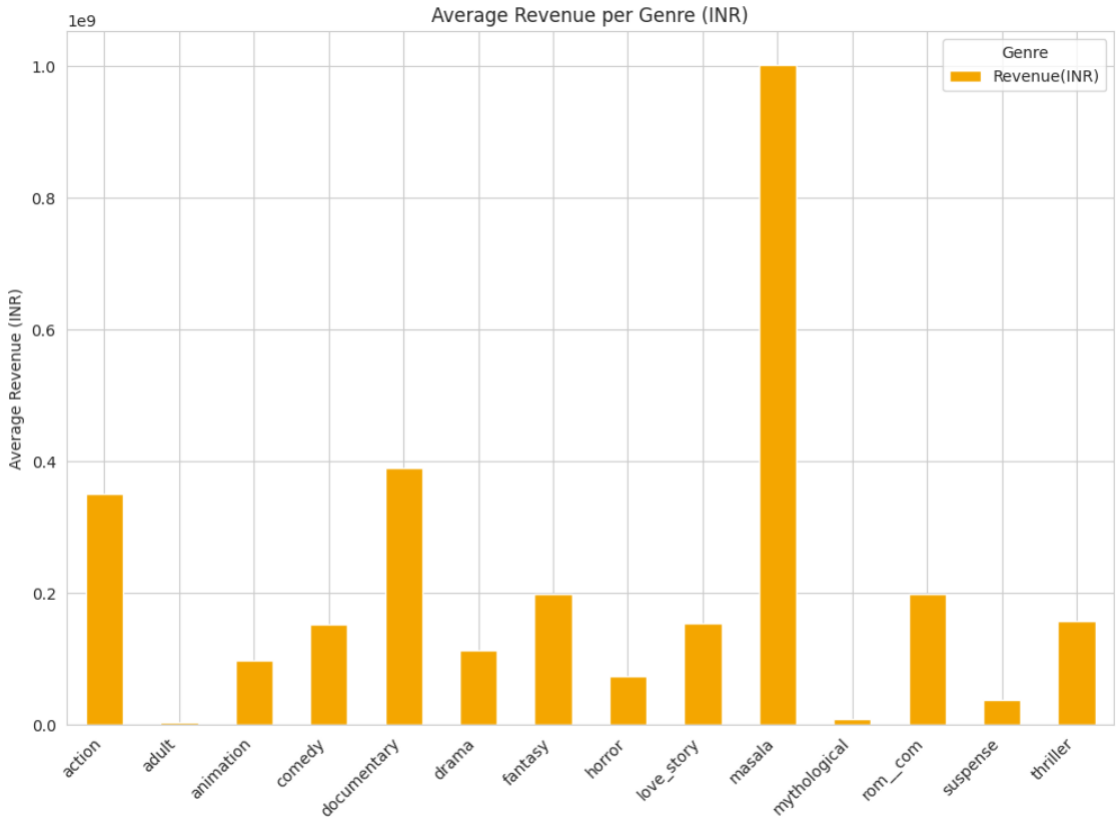
- **Top 5** Most Popular **Genres** of All Time
  - Drama, Comedy, Thriller, Love Story, Action



GENRE ANALYSIS

- Average Revenue Collected for Each Genre

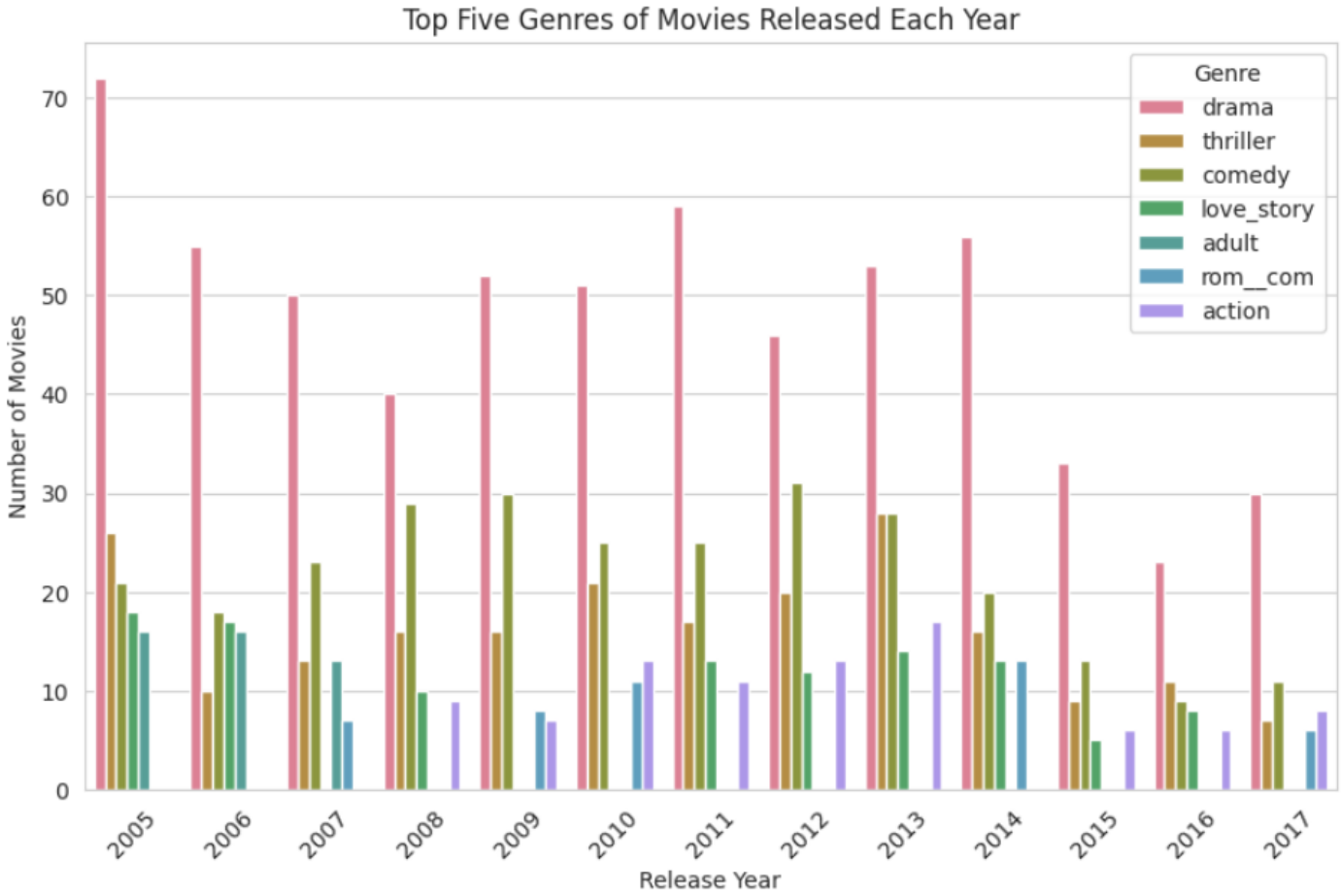
- **Masala Genre** Films Collected the **Most Revenue** on Average
  - Masala Genre - Combination of Action, Comedy, Romance, and Drama Genres

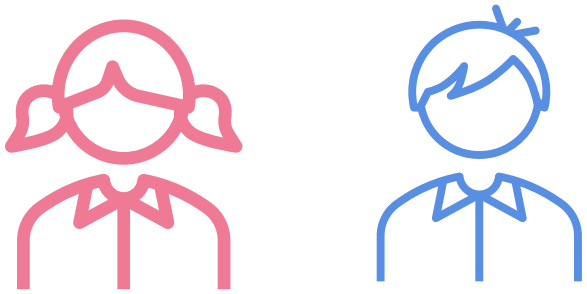


GENRE ANALYSIS

- **Top 5** Genres of Movies Released Each Year

- **Drama Genre** Movies are the **Most Released** Each Year





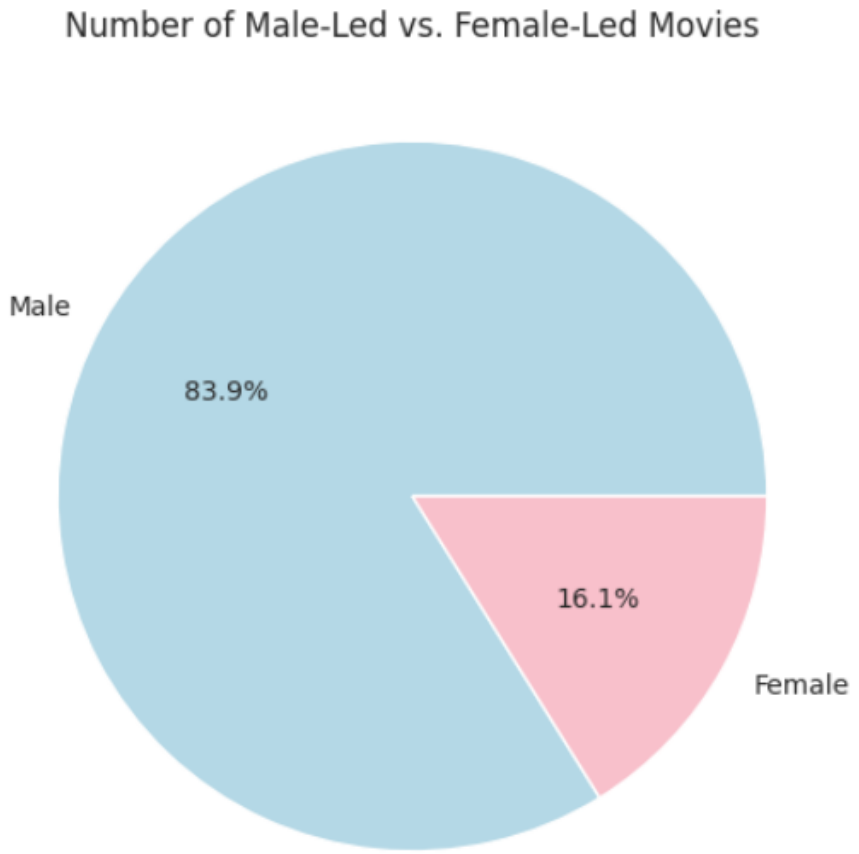
GENDER REPRESENTATION IN BOLLYWOOD

The Impact of Gender on Bollywood Movies

GENDER REPRESENTATION IN BOLLYWOOD

- 1397 Movies with Male Lead Star
- 268 Movies with Female Lead Star

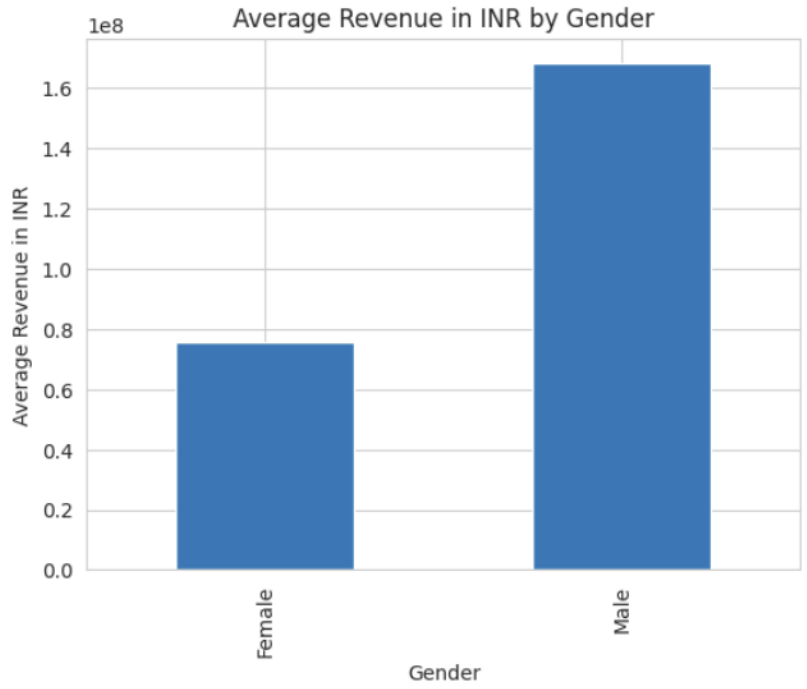
- Male Stars are more likely to be announced as the Lead Star of a movie, even if they are acting alongside Female Stars



GENDER REPRESENTATION IN BOLLYWOOD

- Difference of Average Revenues Earned by Movies with Male vs. Female Lead Stars

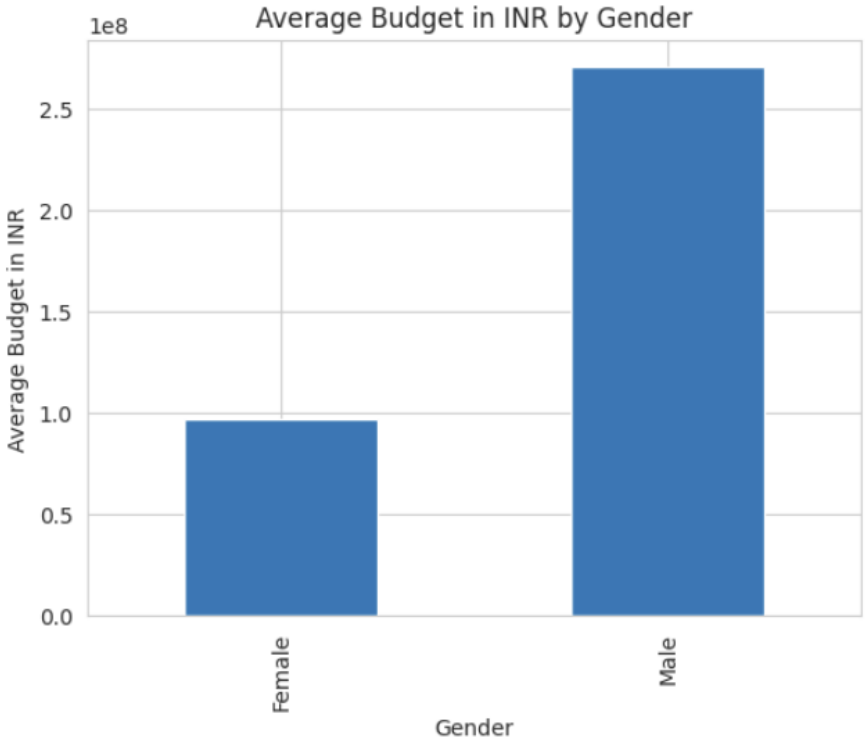
- Hypothesis Two Sample T-Test
  - Difference in Average Revenues is **Significant** (P-Value ≈ 1.49e-08). Male-Led Movies Tend to Earn More in Revenues.



GENDER REPRESENTATION IN BOLLYWOOD

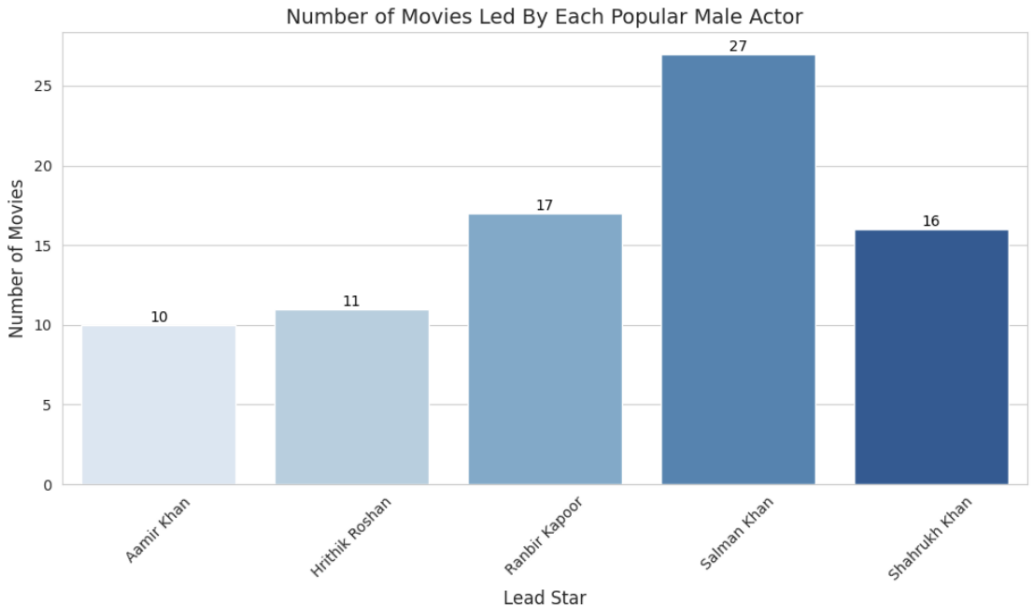
- Difference of Average Budgets Given to Movies with Male vs. Female Lead Stars

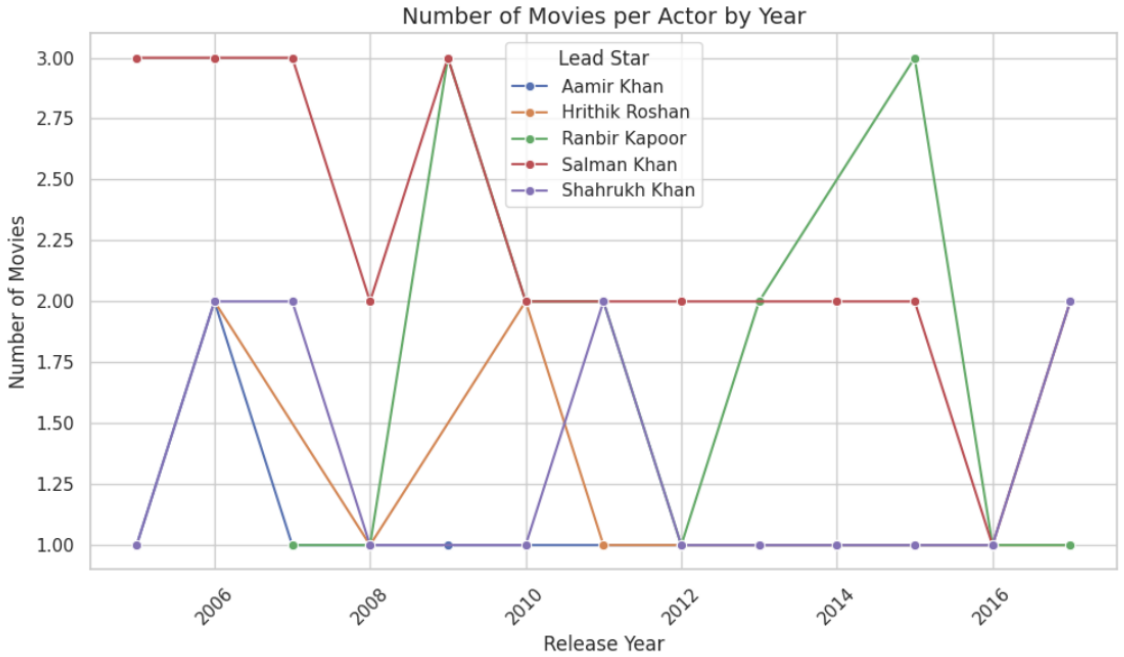
- Hypothesis Two Sample T Test
  - Difference in Average Budgets is **Significant** (P-Value ≈ 2.65e-05). Male-Led Movies Tend to be Given Higher Budgets.



GENDER REPRESENTATION IN BOLLYWOOD

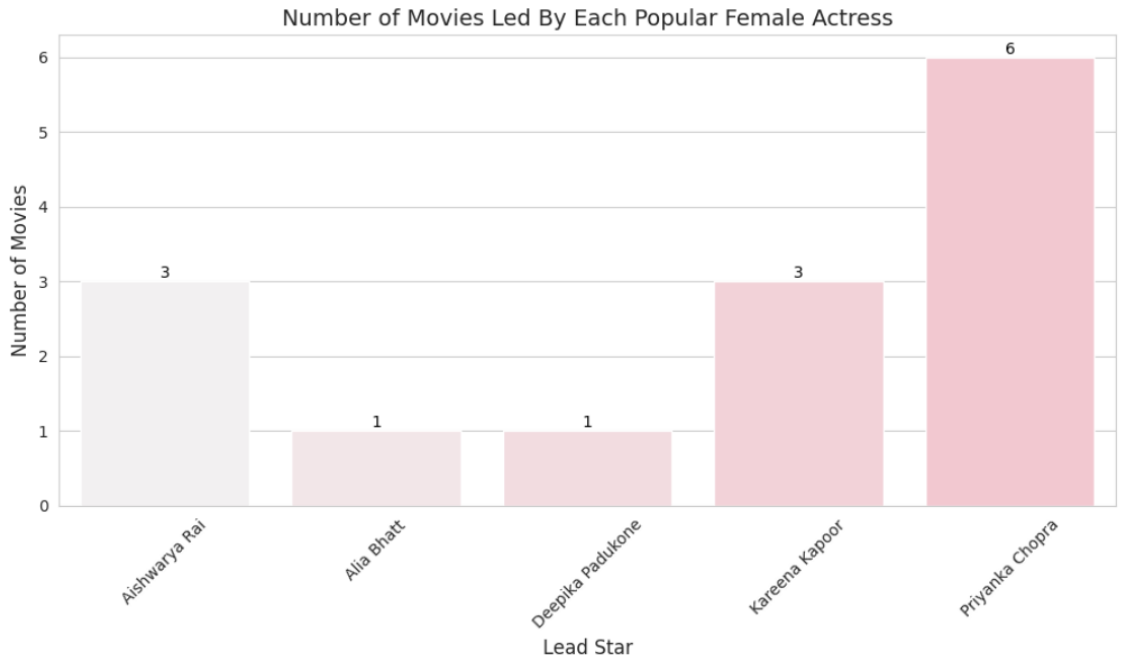
- Top Male Actors' Movies

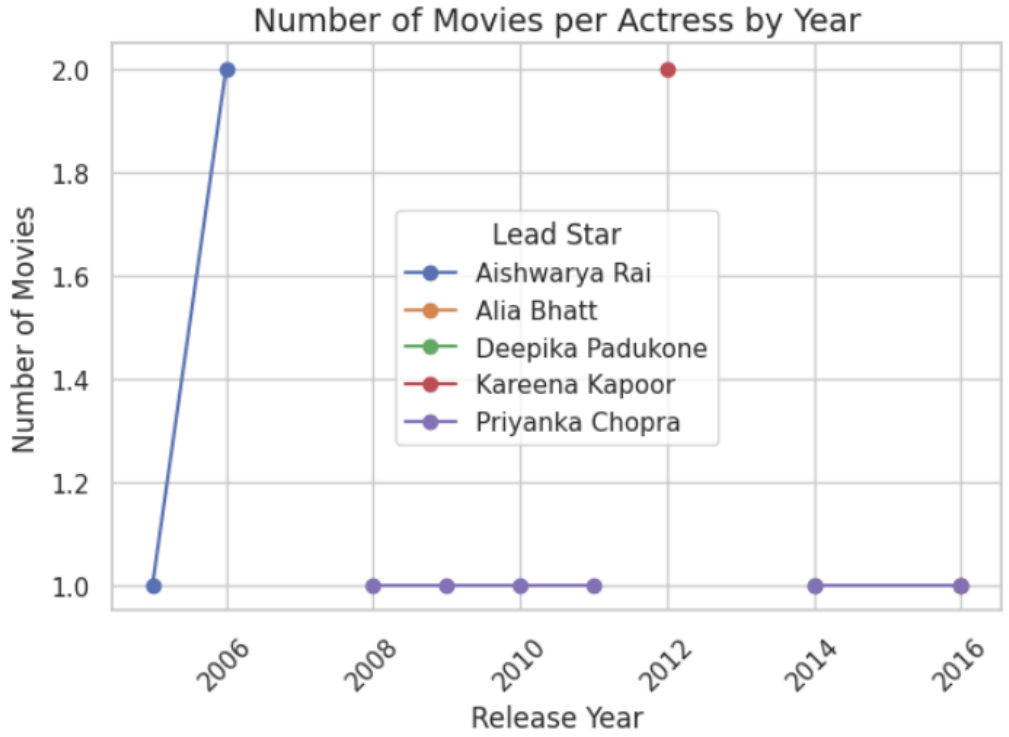




GENDER REPRESENTATION IN BOLLYWOOD

- Top Female Actresses' Movies



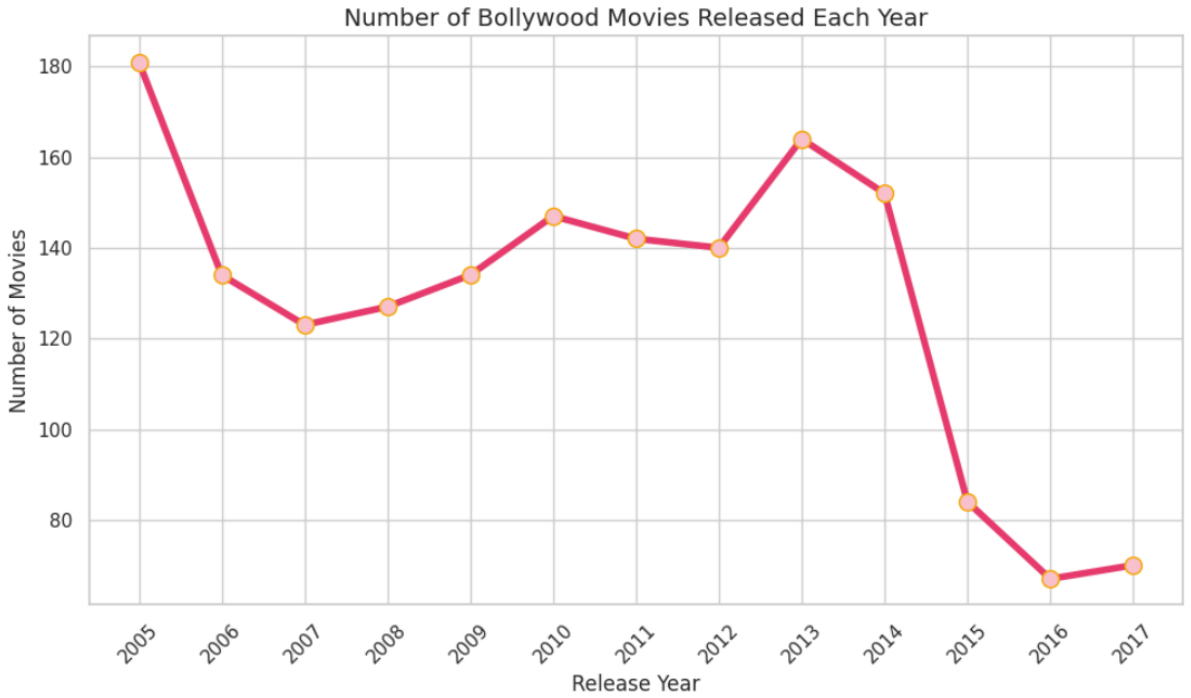


BOLLYWOOD OVER THE YEARS

A Look at Bollywood's Timeline, History, and Achievements Over the Years

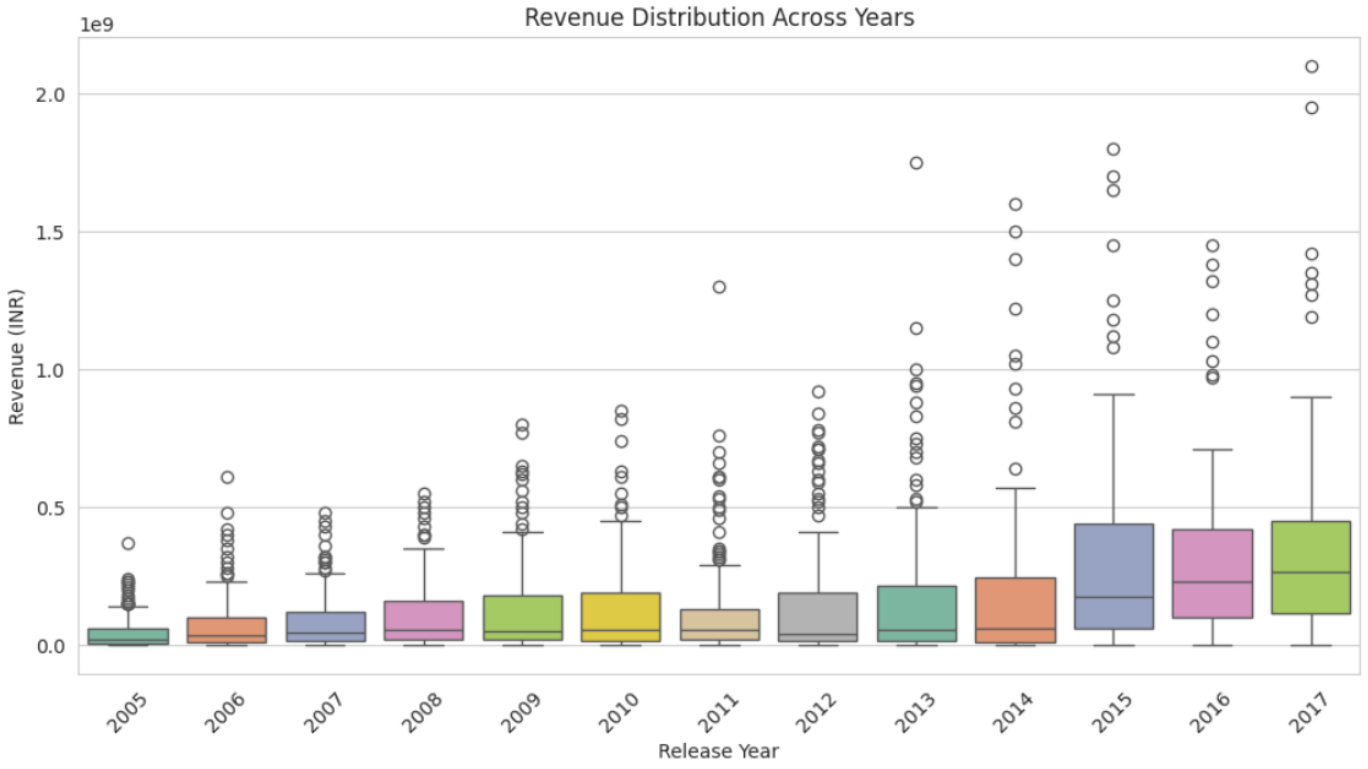
BOLLYWOOD OVER THE YEARS

- Number of Movies Released Over the Years
- **Highest Number** of Films Released in **2005**
- Overall **Decreasing Trend** in Movies Released from 2013 to 2017, with a significant decrease from 2014 to 2015
- Decrease in Released Movies Aligns with the **Rise of Streaming** Platforms (Netflix)



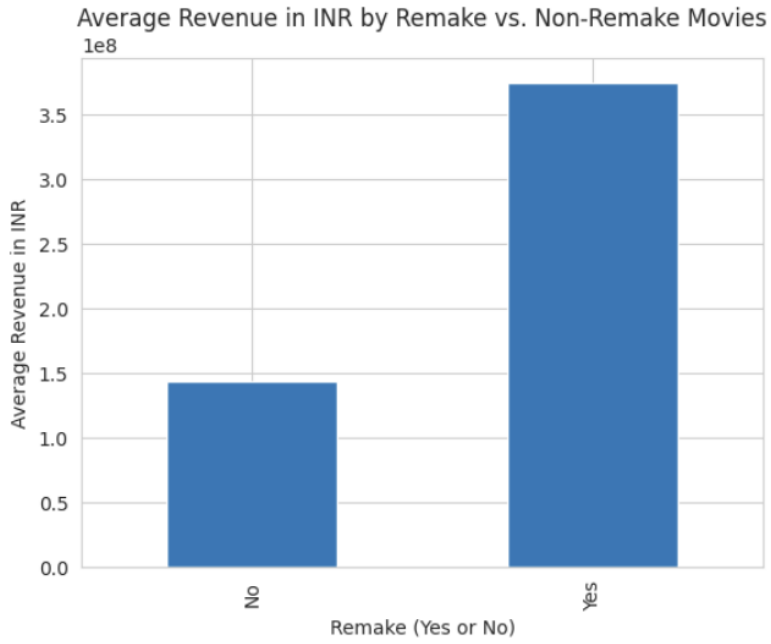
BOLLYWOOD OVER THE YEARS

- Revenues of Bollywood Movies over the Years
- Despite Less Movies being Released in the Last 10 Years, Movies from 2015 to 2017 are shown to have **Higher Ranges** of Revenues.
  - Focus on Releasing Projects that would Generate More Revenue



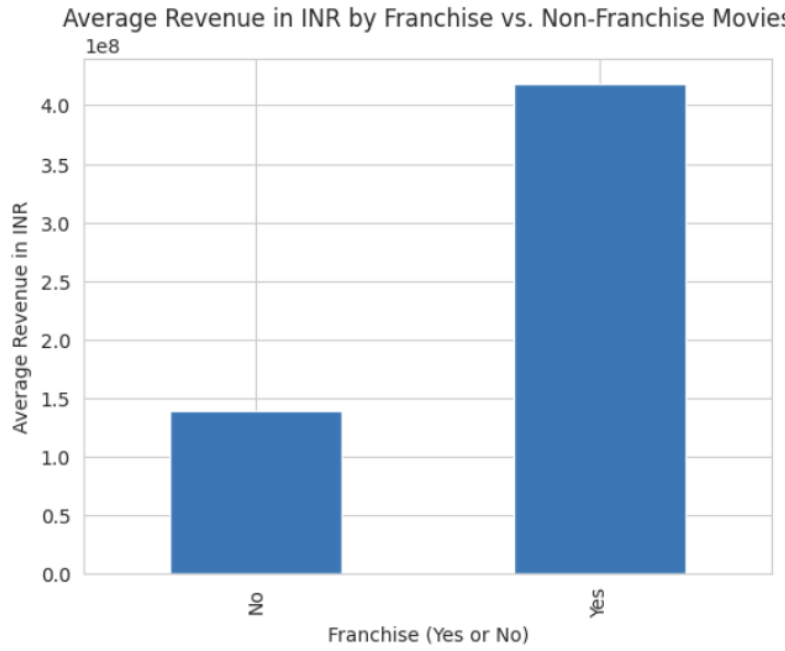
BOLLYWOOD OVER THE YEARS

Remake Vs. Non-Remake Average Revenues



Significant Difference: P-Value of 3.74e-15

Franchise Vs. Non-Franchise Average Revenues

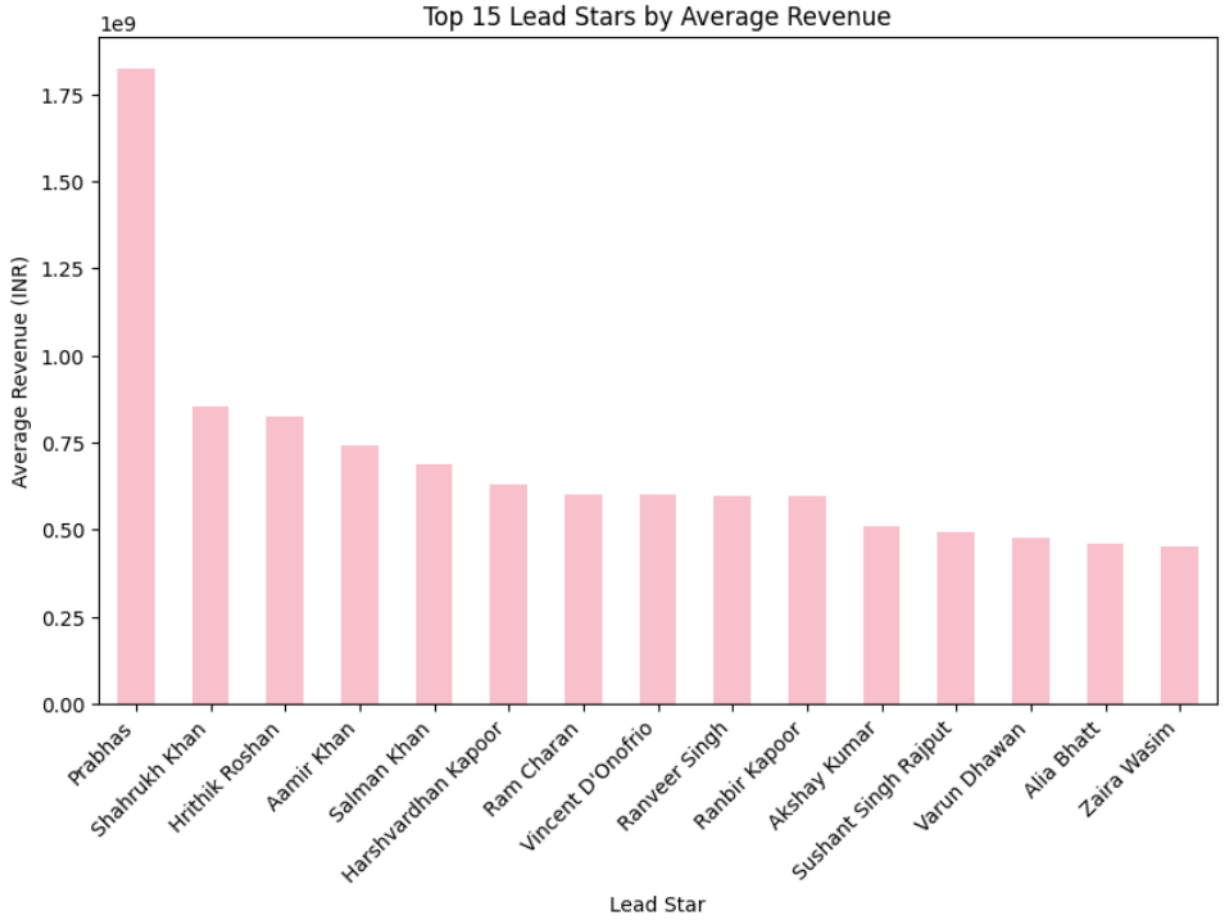


Significant Difference: P-Value of 2.82e-24

BOLLYWOOD OVER THE YEARS

- Top 15 Lead Stars by Average Revenue Collected

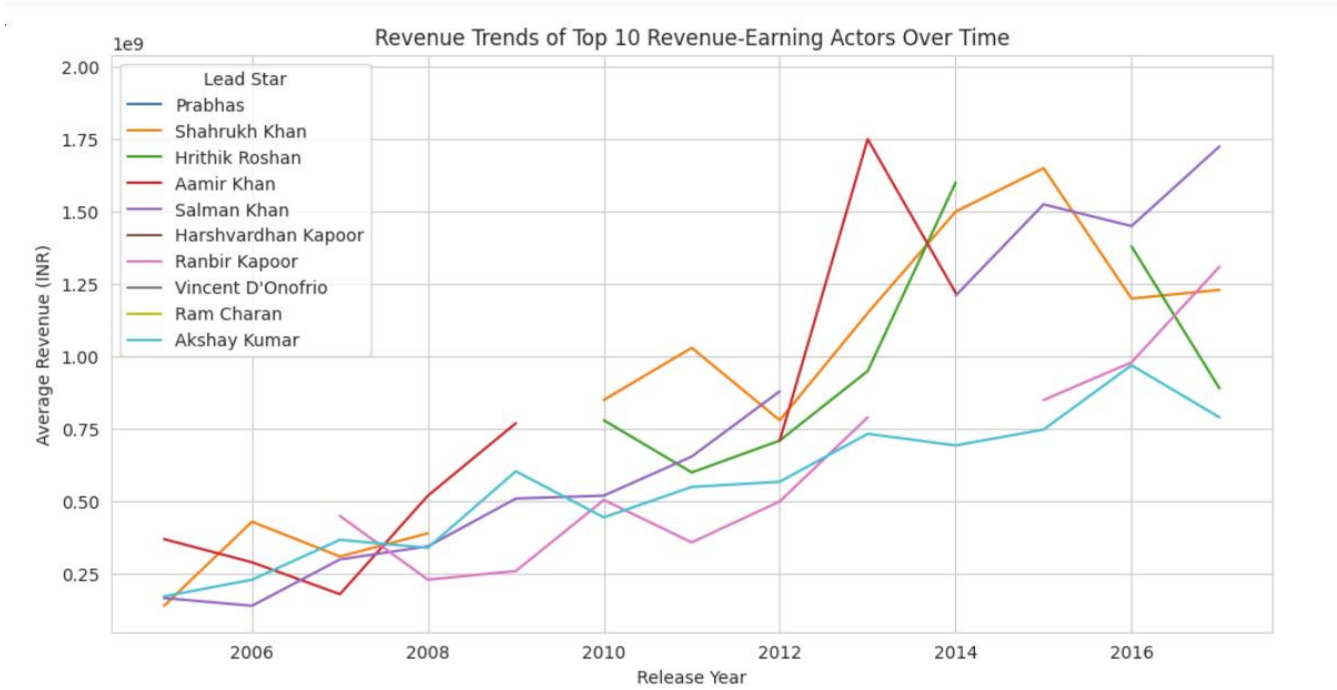
- Note: Some Lead Stars have More or Fewer Movies Released than Other Lead Stars
  - Example: Prabhas is only Represented in Two Films in this Dataset, Bahubali and Bahubali 2, which were blockbuster milestones for a Non-Hindi Industry Movie among Hindi Audiences



BOLLYWOOD OVER THE YEARS

- Top Lead Stars' Revenues Over the Years

- Some Actors were among the Top Revenues in the mid-2000s and in the 2010s, showing their **Longevity** in Hindi Cinema

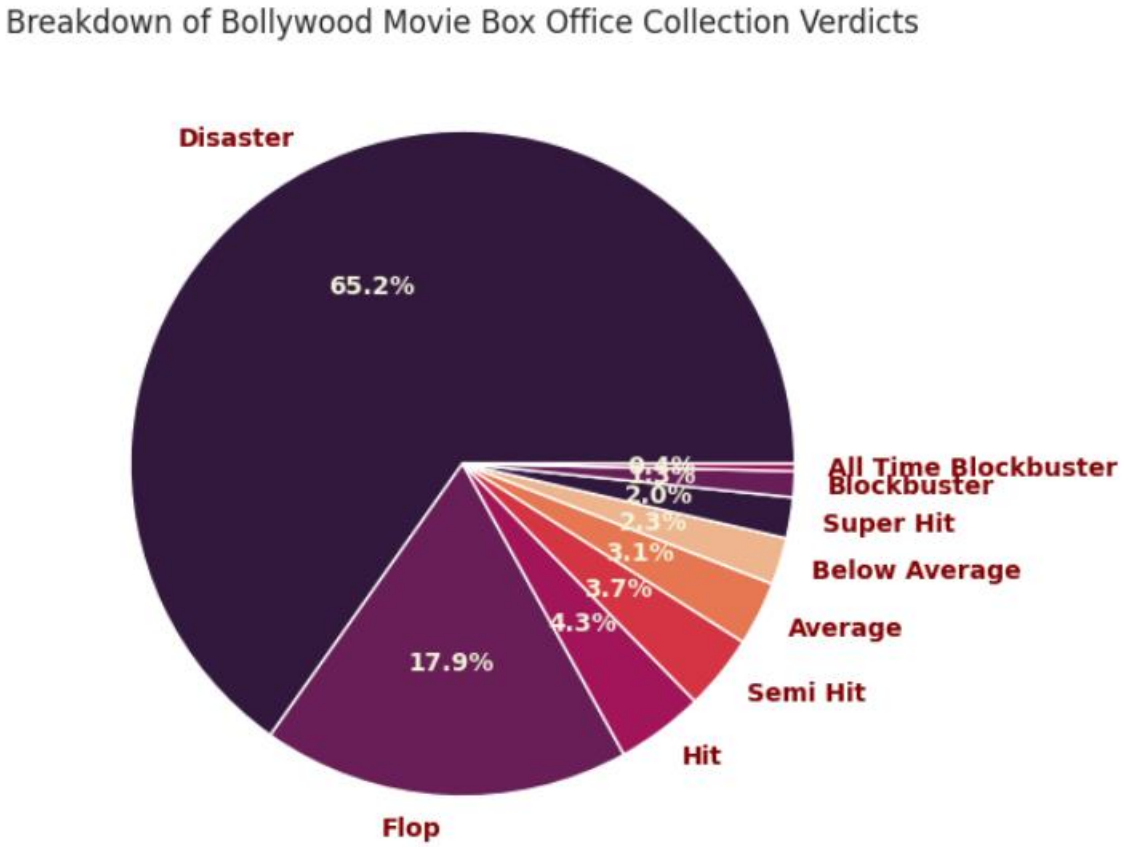


INDIAN BOX OFFICE ANALYSIS

Analysis of Bollywood Movies' Performance
According to Indian Box Office Classifications

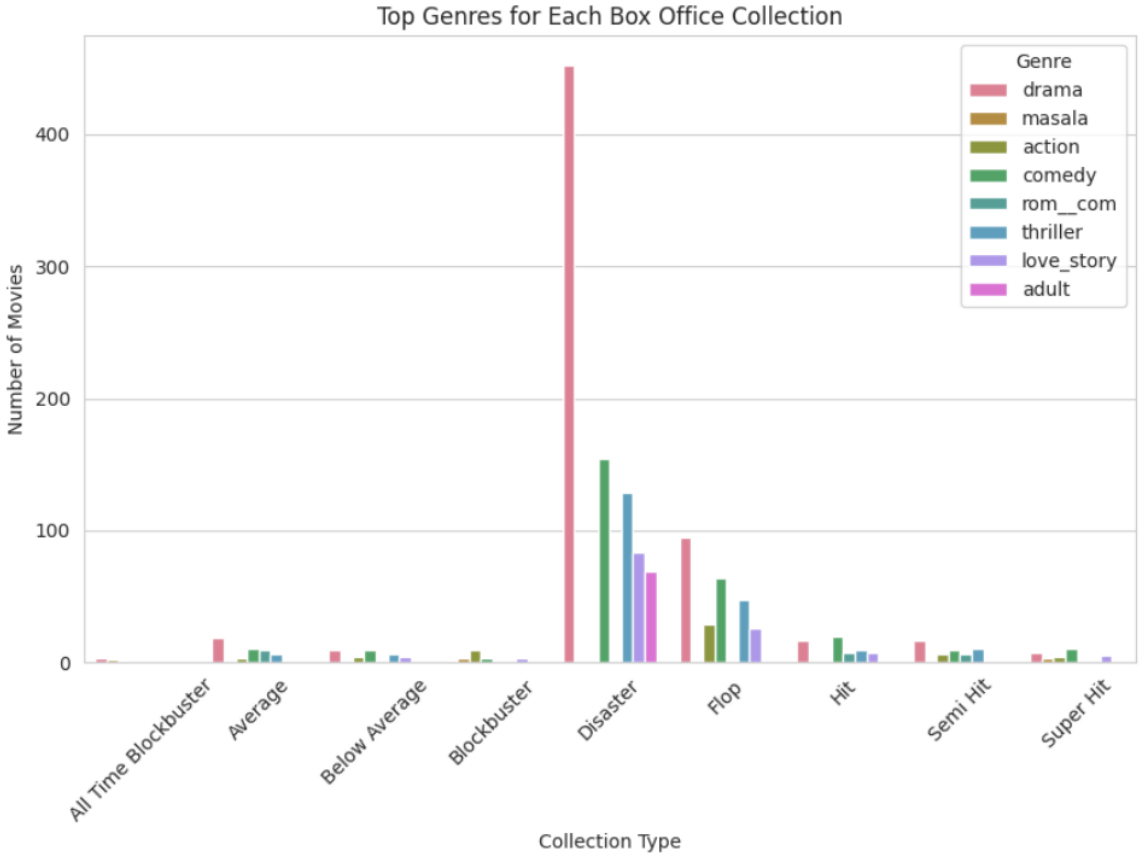
INDIAN BOX OFFICE ANALYSIS

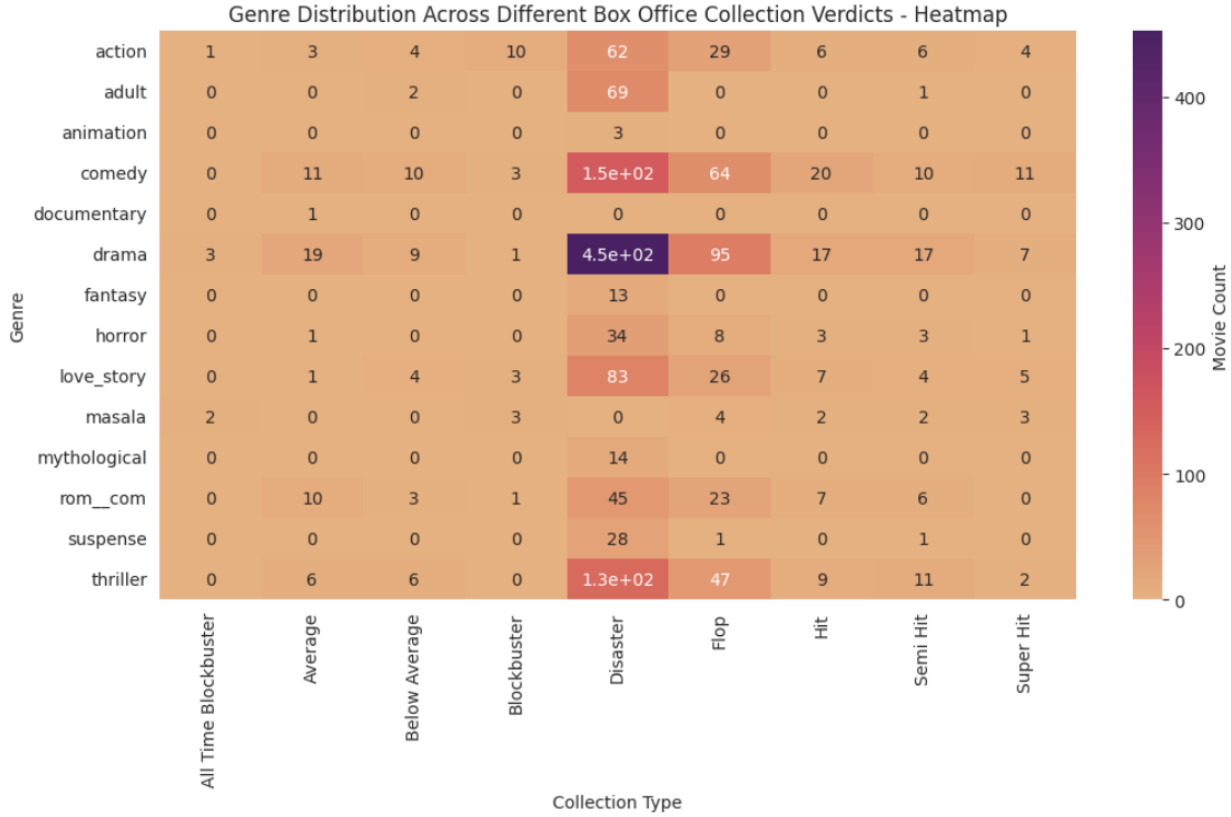
- Box Office Collection Distribution
- Movies Mostly Fall in the **Disaster and Flop** Categories (Negative Performance)
- **Positive Performance** Outcomes (All Time Blockbuster, Blockbuster, Super Hit, Hit, Semi Hit, Average) are **Less Likely**.

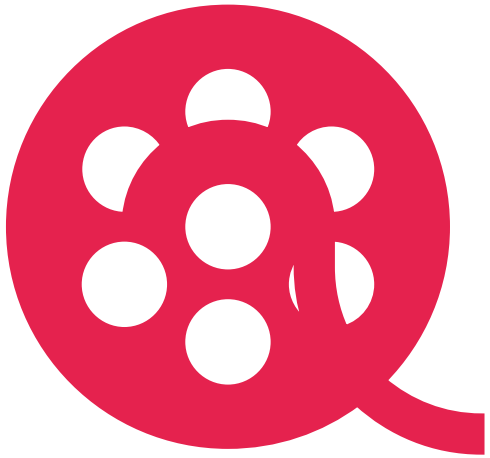


INDIAN BOX OFFICE ANALYSIS

- Top Genres per Collection Level





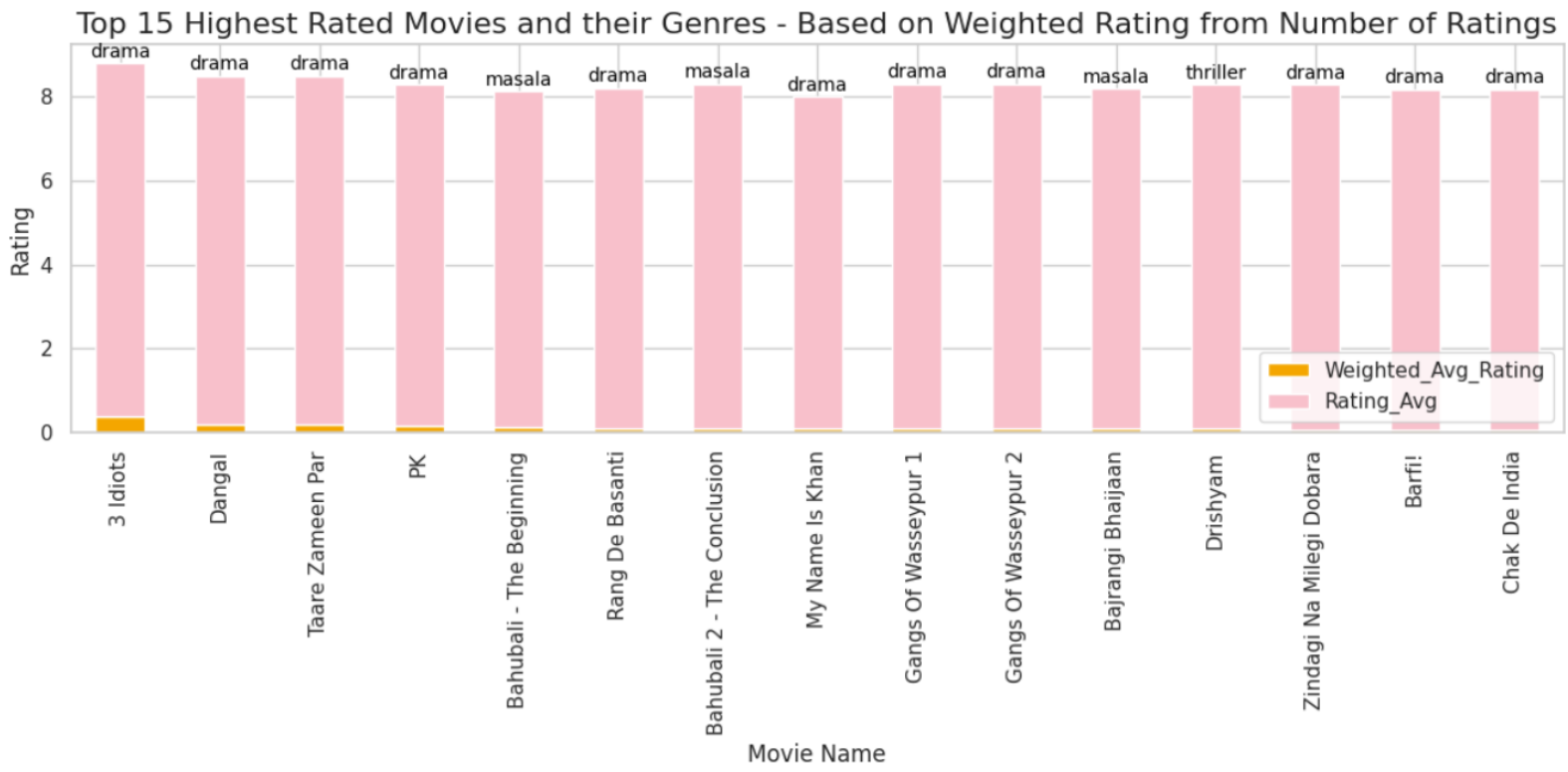


AUDIENCE FAVORITES

Bollywood Films that received High Ratings,
Praise, and Critical Acclaim from the Audience

AUDIENCE FAVORITES

- Highest Rated Movies (Weighted Ratings to Account for # of Ratings)
- **Drama Genre** is Popular among **Highly Rated** and **Praised** Movies



CONCLUSIONS

- Certain **Genres** are **More Popular** among Audiences
- Most Films are Not as Profitable and Classified as a **"Disaster"**
- Less Female Representation as Lead Star
  - Most Act as the **Supporting Heroine**
- **Rise in Popularity** of South Indian Produced Films Among Hindi Audiences
- Legendary Acts still **Dominate** Box Office after Many Decades
- **Less Movies** being Released/Produced Now Compared to Before
  - Streaming Platforms are a Possible Factor

BOLLYWOOD IN THE FUTURE

- Trying Different Genres while still Releasing Movies with Popular Genres
  - Drama, Action, Masala, Romance, Horror/Thriller
- More Sequels and Remakes of Movies
  - Includes Remakes of Movies from Other Languages
- Investing in More Female Talent to Represent Diverse Storylines
- Rise in Popularity of Films Produced in other Indian States
- Movies that are More "Daring" and/or Smaller in Budget will be Released on OTT Streaming Platforms instead of Theatrical Releases

FUTURE ANALYSIS

- Can Rise of OTT (Netflix, amazon prime) account for Decrease in Films being made?
- Track the Popularity of Hindi-dub Films (Films originally produced in Different Languages)
- Predictions of the Genres that will be Popular in Upcoming Years
- Observe the Performance of a Movie Based on the Supporting Heroine instead of only the “Lead Star” Hero