

Giving Microsoft a Solid Start in the Movie Industry

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Microsoft

Summary

Microsoft is setting out to create its own Movie Studio. To ensure this is a successful endeavor, we must:

- Analyze movie data to discover insights to which movies are most successful
- Explore budget data to properly understand how much it may cost to create a movie
- Explore what genres in movies perform well in the box office

Outline

- Business Problem
- Data
- Methods
- Results
- Conclusions

Business Problem

- Unknown pathway to creating successful movies
- Need to match or exceed industry standard of success for movies we produce
- Ensure we can make more movies in the future



Data & Methods

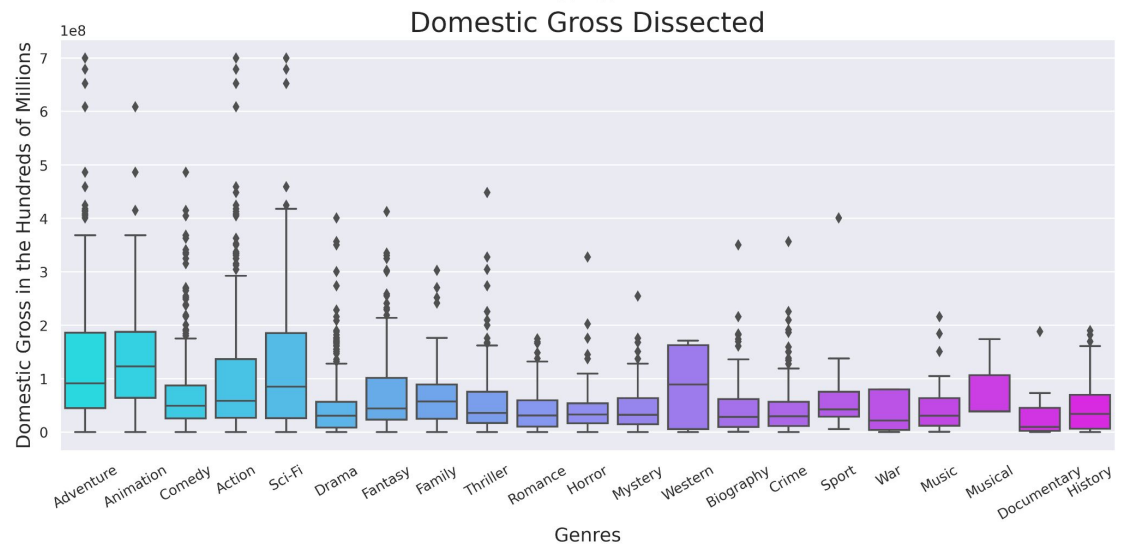
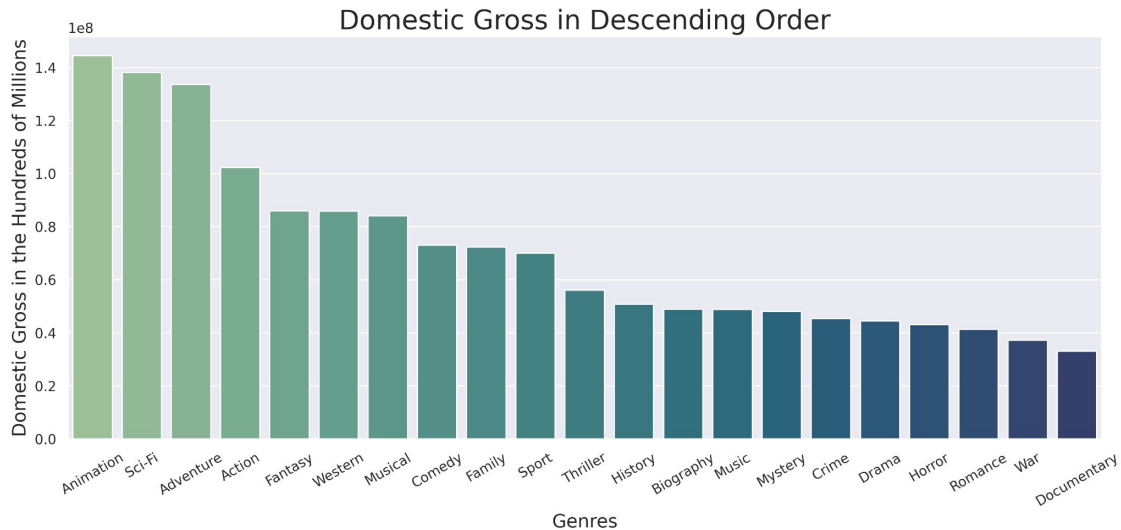
- Data sourced from:
 - IMDB
 - Box Office Mojo
 - The Numbers
- 982 Movies
 - Dating back to 2010
- Movie Title, Domestic Gross, Worldwide Gross, Genres, and Movie Budget Data

Results

Based on gross sales data, these genres generate the most capital in both domestic & worldwide metrics

- Sci-Fi
- Adventure
- Action

- Each box in a box plot, represents 50% of the data for that column.
 - The line in each box represents the median
- Tick Marks encompass 99.3% of the data
- Outliers are represented by dots above the tick marks. About 0.7% of the data total

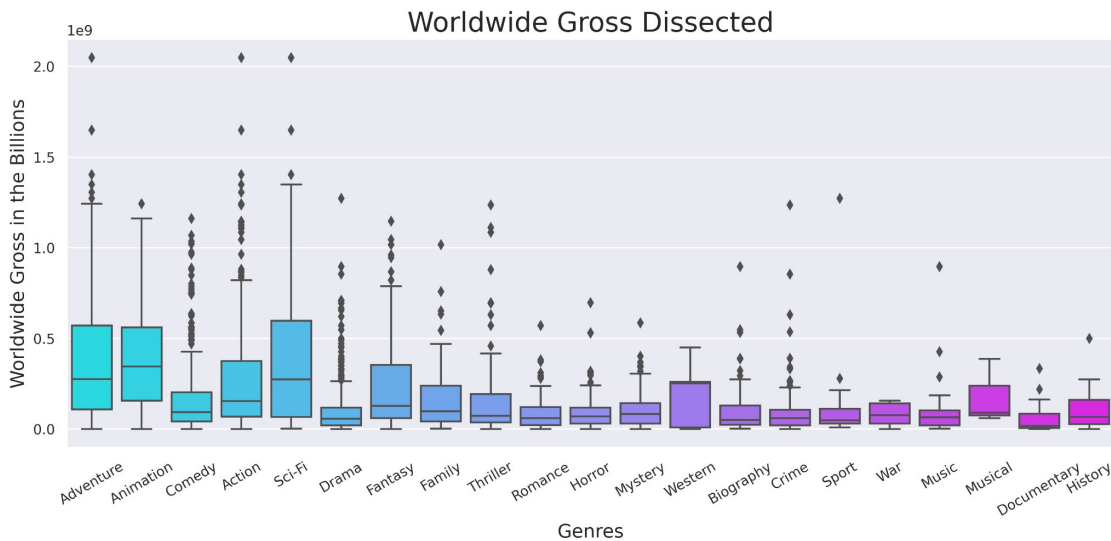
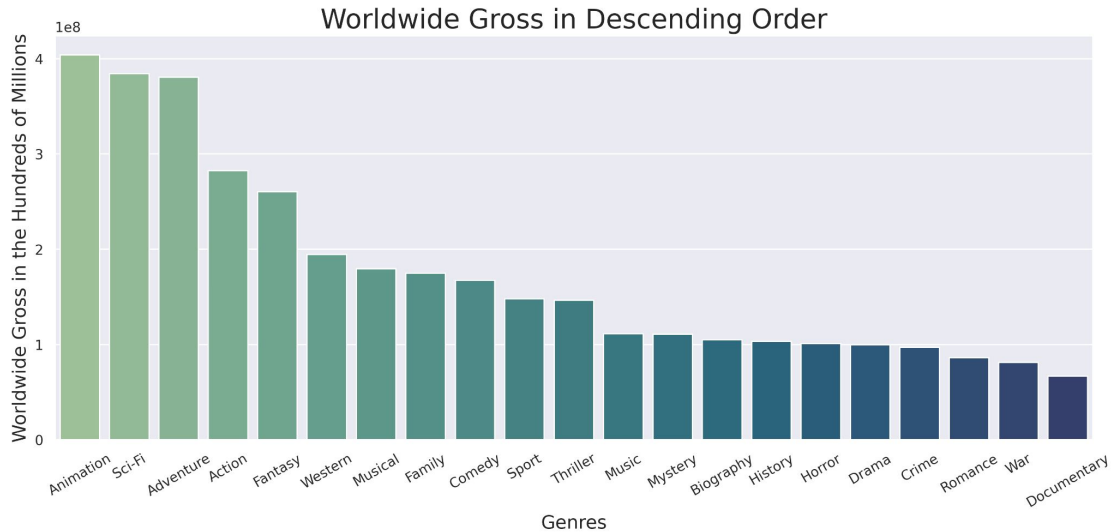


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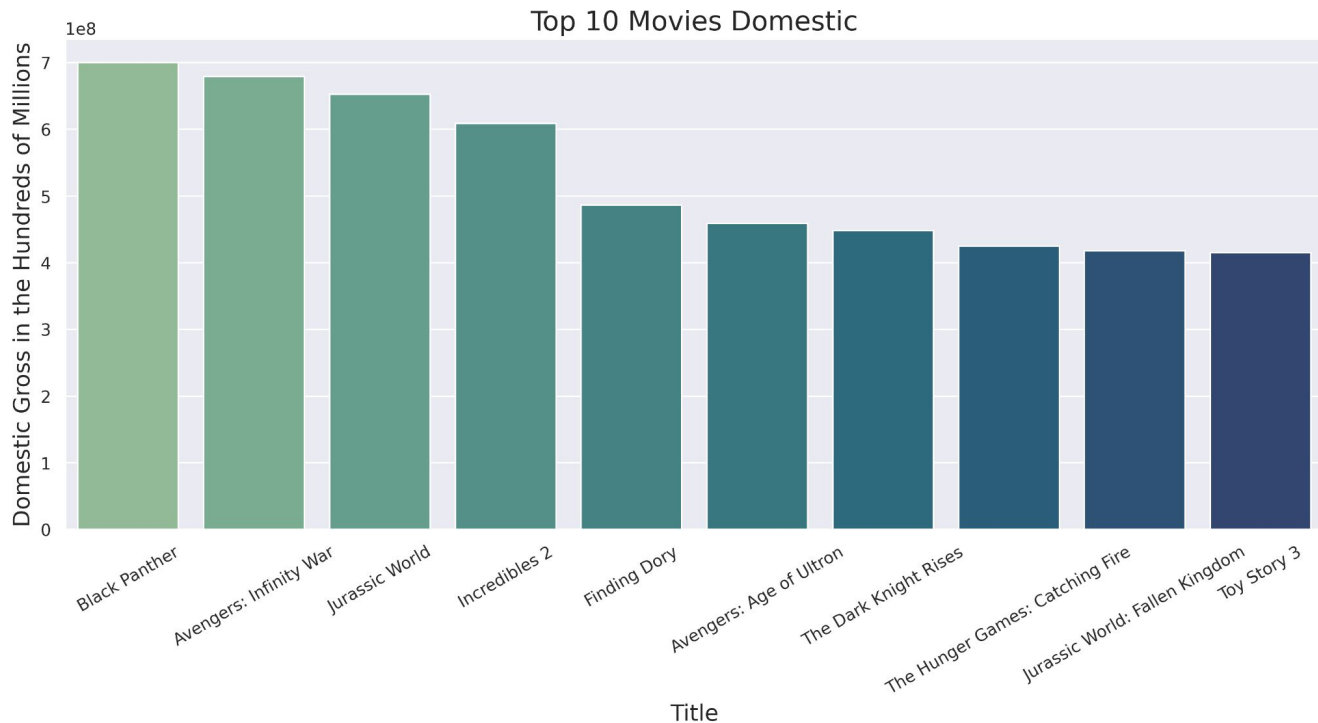
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Results

Genres of the Top 10 Domestic Movie sales

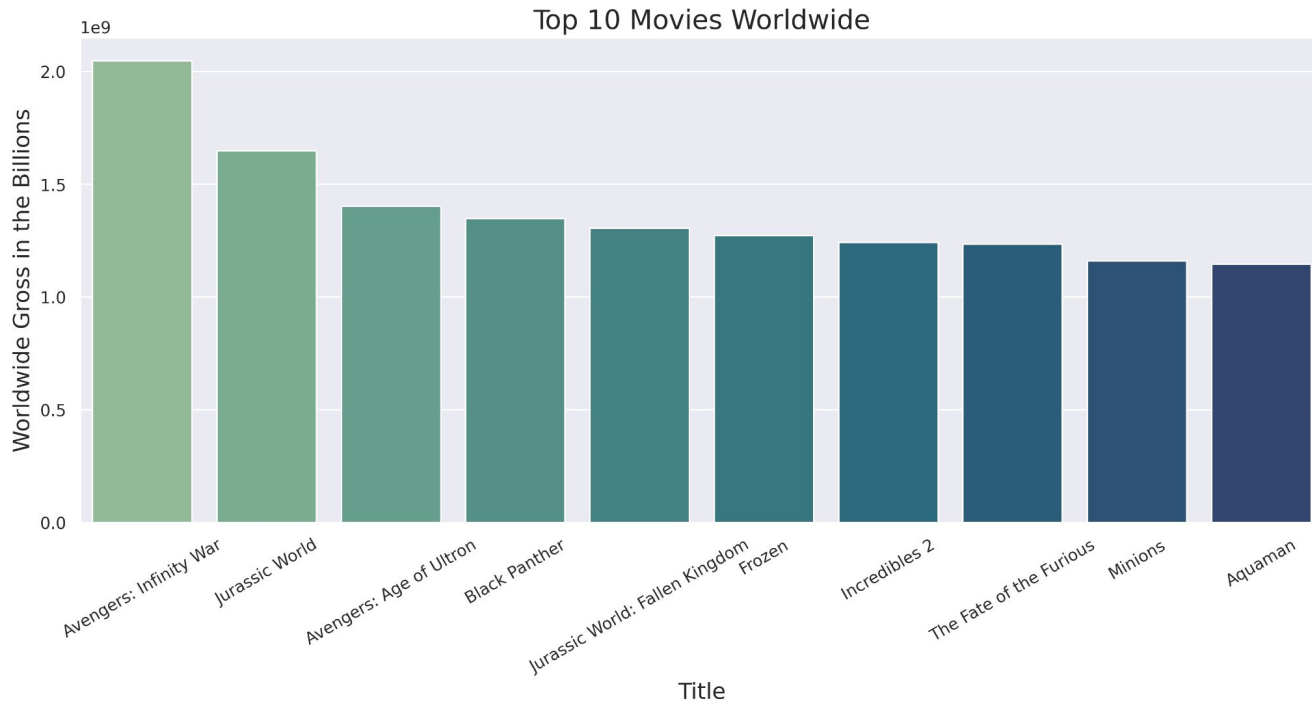
1. **Black Panther**
Action, Adventure, Sci-Fi
2. **Avengers: Infinity War**
Action, Adventure, Sci-Fi
3. **Jurassic World**
Action, Adventure, Sci-Fi
4. **Incredibles 2**
Action, Adventure, Animation
5. **Finding Dory**
Adventure, Animation, Comedy
6. **Avengers: Age of Ultron**
Action, Adventure, Sci-Fi
7. **The Dark Knight Rises**
Action,Thriller
8. **The Hunger Games: Catching Fire**
Action, Adventure, Sci-Fi
9. **Jurassic World: Fallen Kingdom**
Action,Adventure,Sci-Fi
10. **Toy Story 3**
Adventure,Animation,Comedy



Results

Genres of the Top 10 Worldwide Movie sales

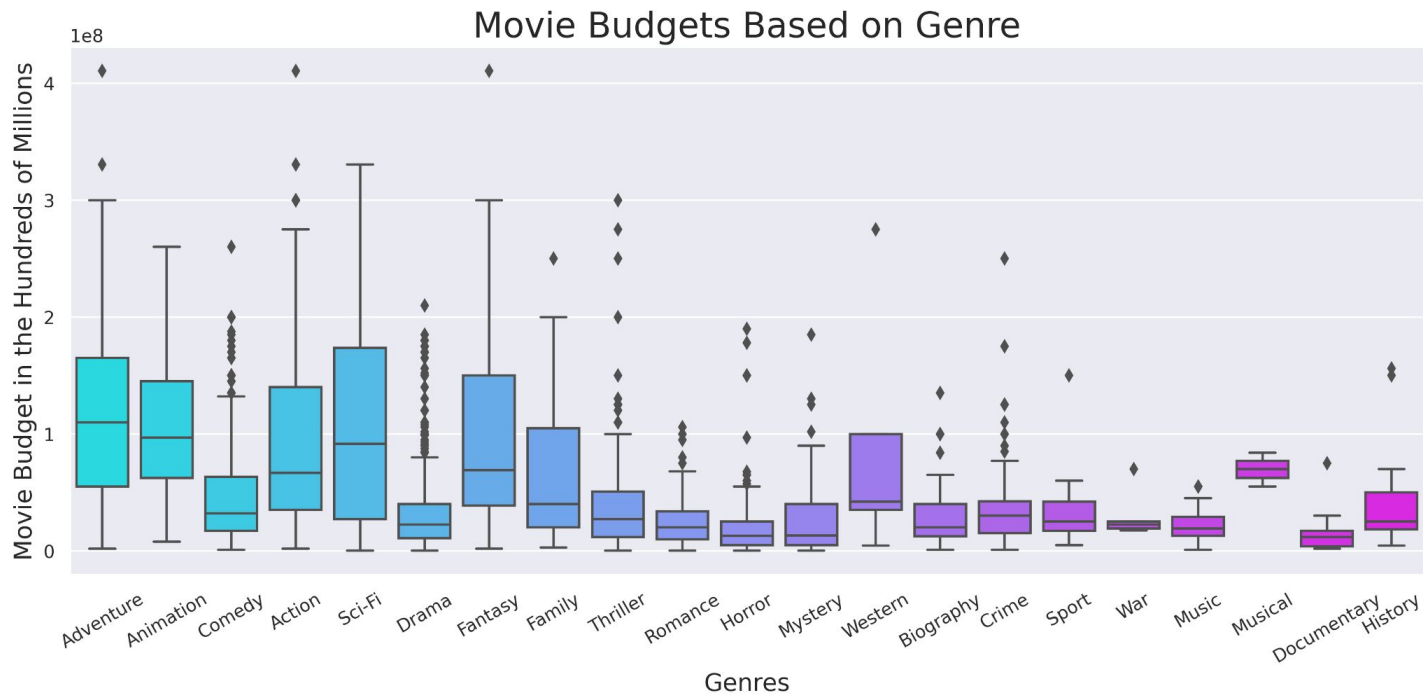
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Action, Adventure, Sci-Fi
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Action, Adventure, Sci-Fi
5. **Jurassic World: Fallen Kingdom**
Action, Adventure, Sci-Fi
6. **Frozen**
Adventure, Drama, Sport
7. **Incredibles 2**
Action, Adventure, Animation
8. **The Fate of the Furious**
Action, Crime, Thriller
9. **Minions**
Adventure, Animation, Comedy
10. **Aquaman**
Action, Adventure, Fantasy



Results

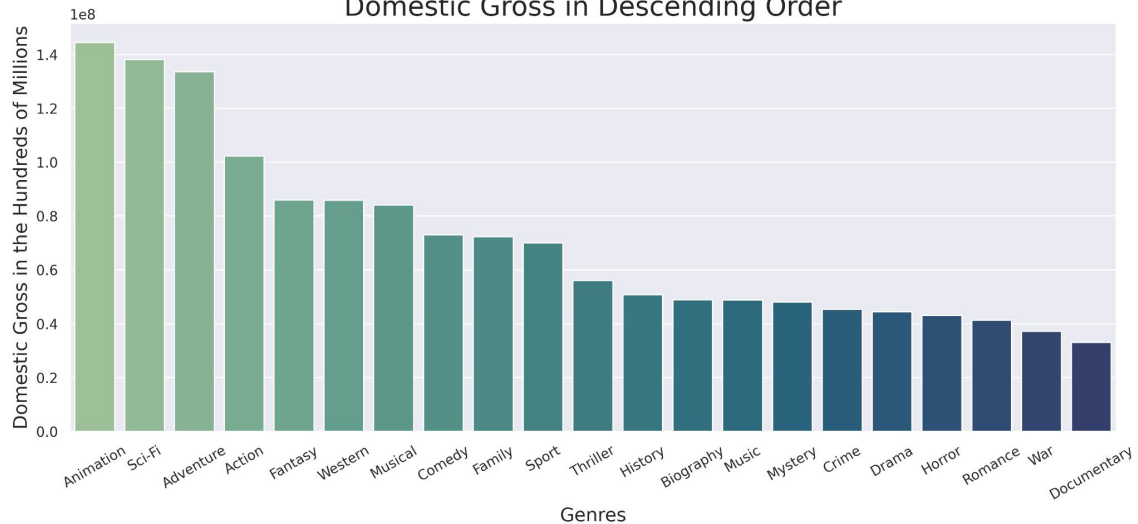
Compared this data to the Domestic & Worldwide sales

- Action, Adventure, Sci-Fi are very lucrative
- Animation movies are also have great showings
- Fantasy movies might break even

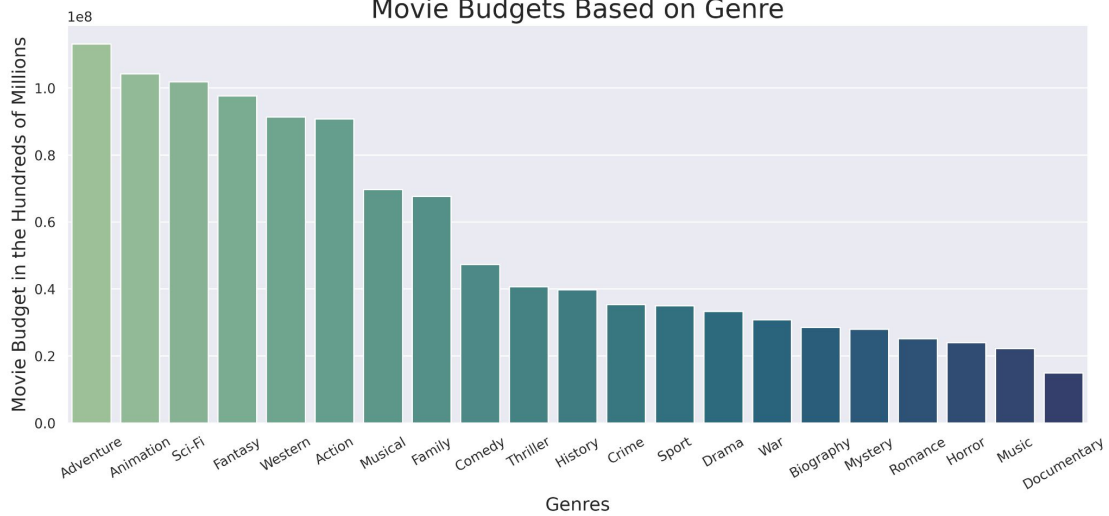


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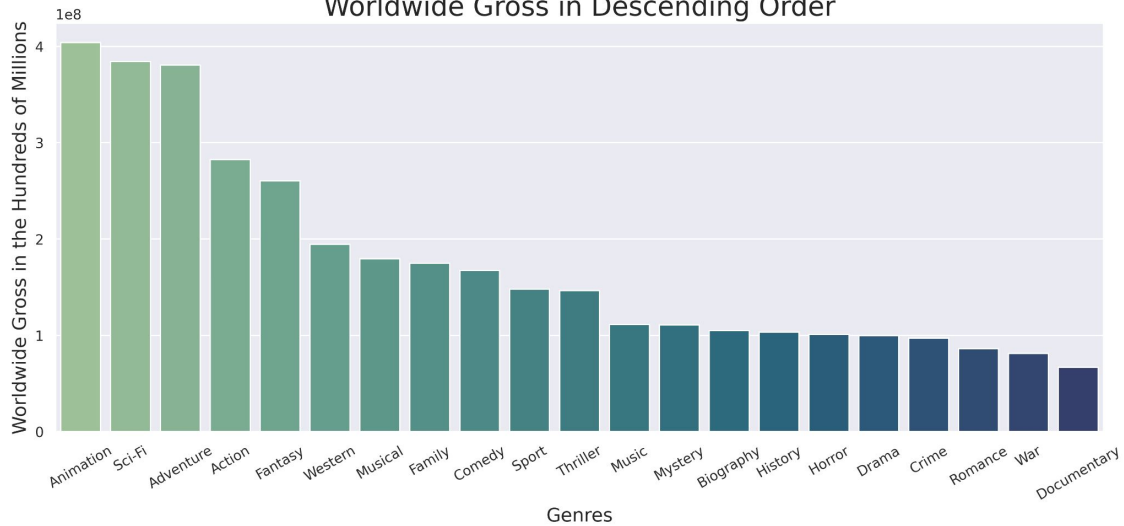
Domestic Gross in Descending Order



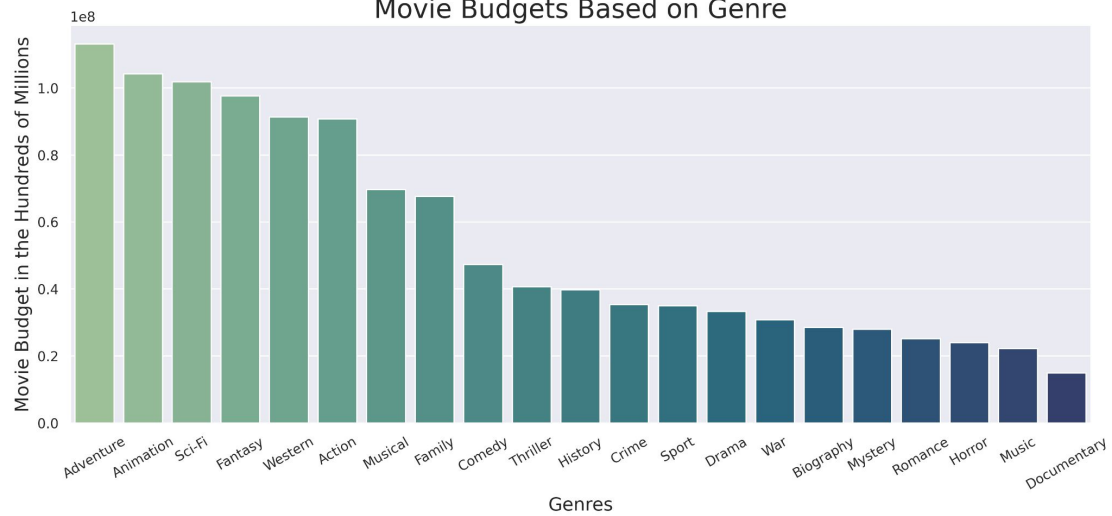
Movie Budgets Based on Genre

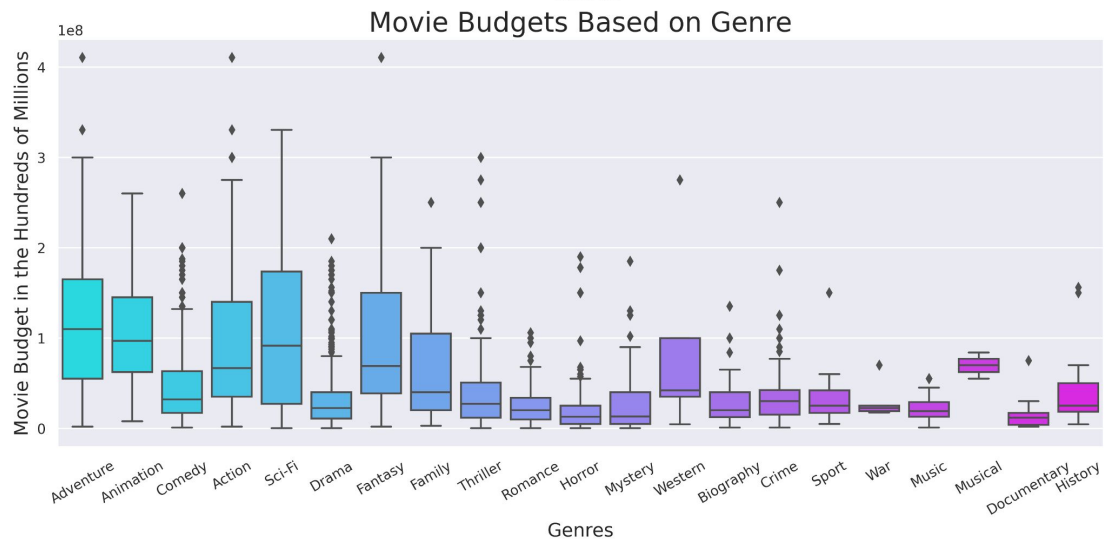
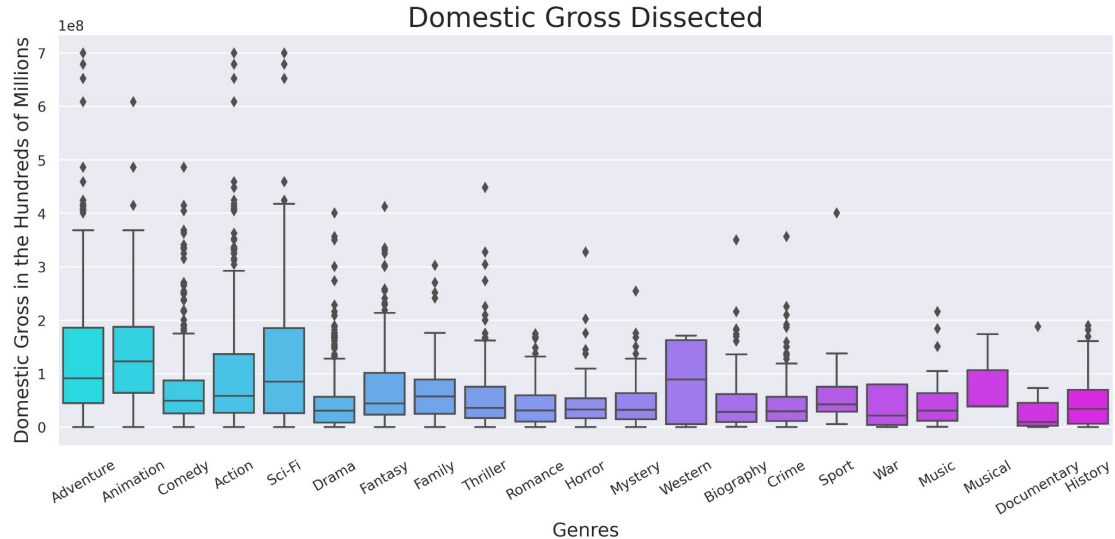


Worldwide Gross in Descending Order



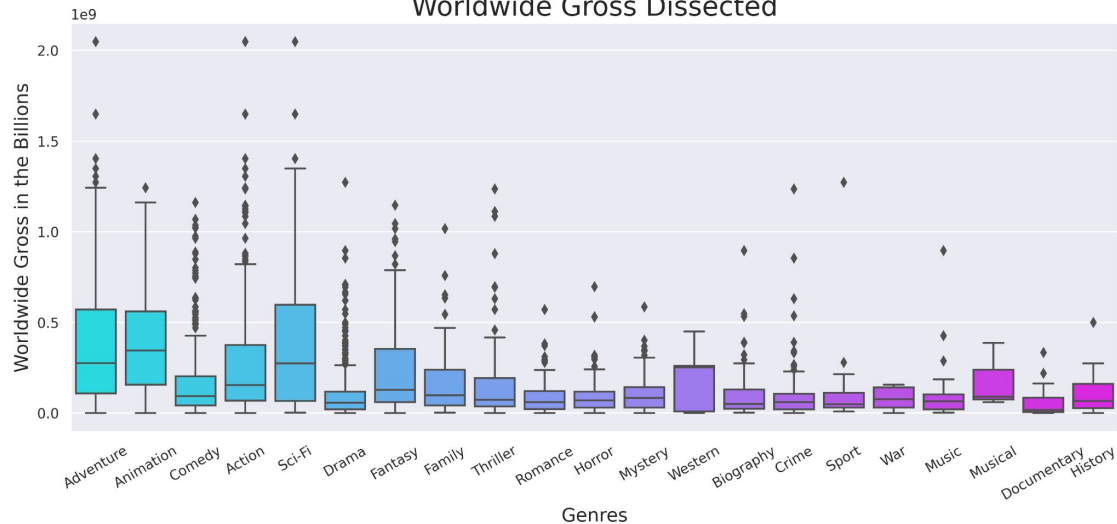
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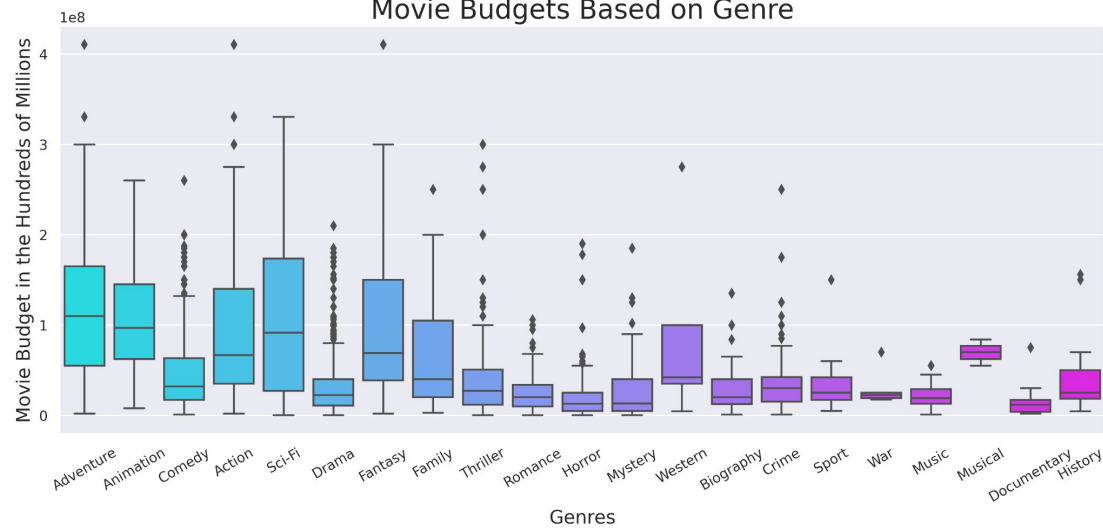


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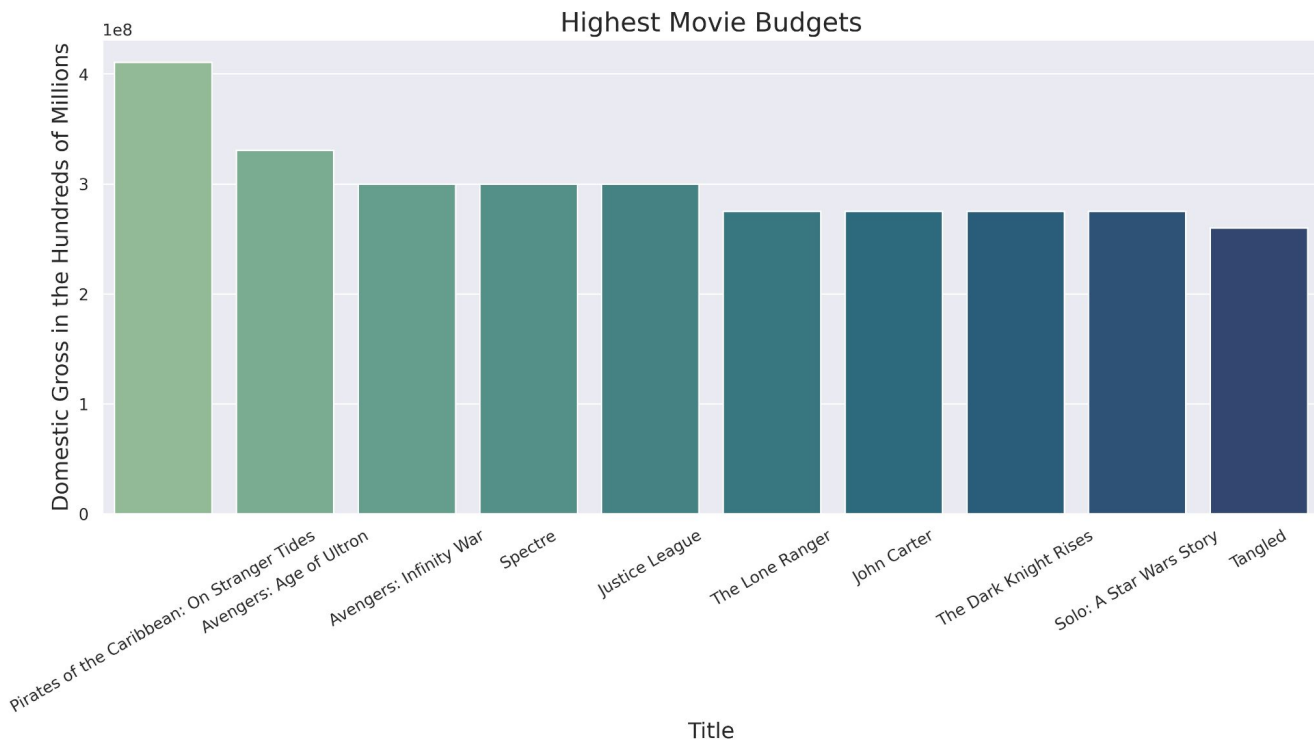
Movie Budgets Based on Genre



Results

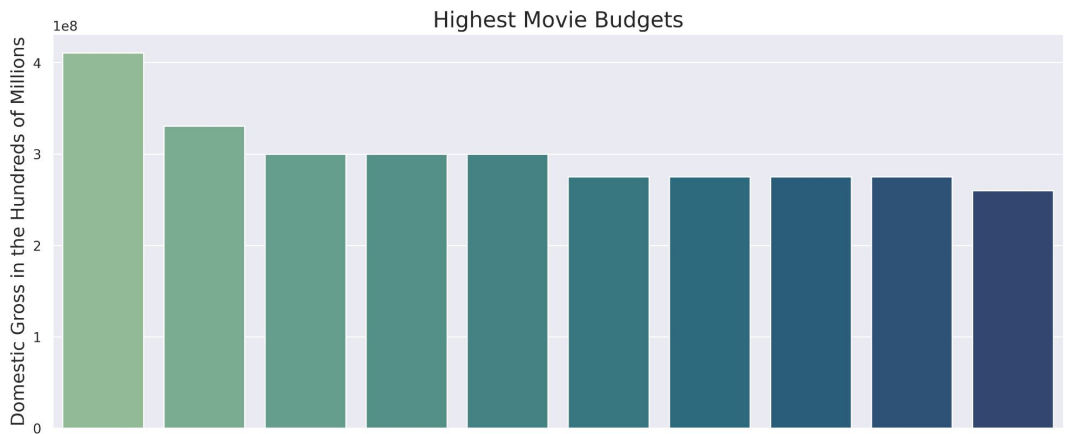
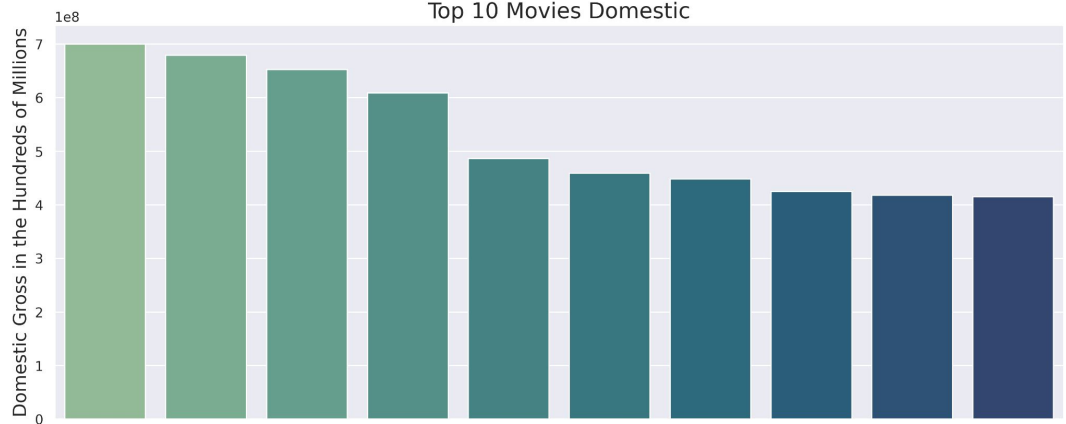
Genres of the Top 10 Movie Budgets

1. **Pirates of the Caribbean: On Stranger Tides**
Action, Adventure, Fantasy
2. **Avengers: Age of Ultron**
Action, Adventure, Sci-Fi
3. **Avengers: Infinity War**
Action, Adventure, Sci-Fi
4. **Spectre**
Action, Adventure, Thriller
5. **Justice League**
Action, Adventure, Fantasy
6. **The Lone Ranger**
Action, Adventure, Western
7. **John Carter**
Action, Adventure, Sci-Fi
8. **The Dark Knight Rises**
Action, Thriller
9. **Solo: A Star Wars Story**
Action, Adventure, Fantasy
10. **Tangled**
Adventure, Animation, Comedy



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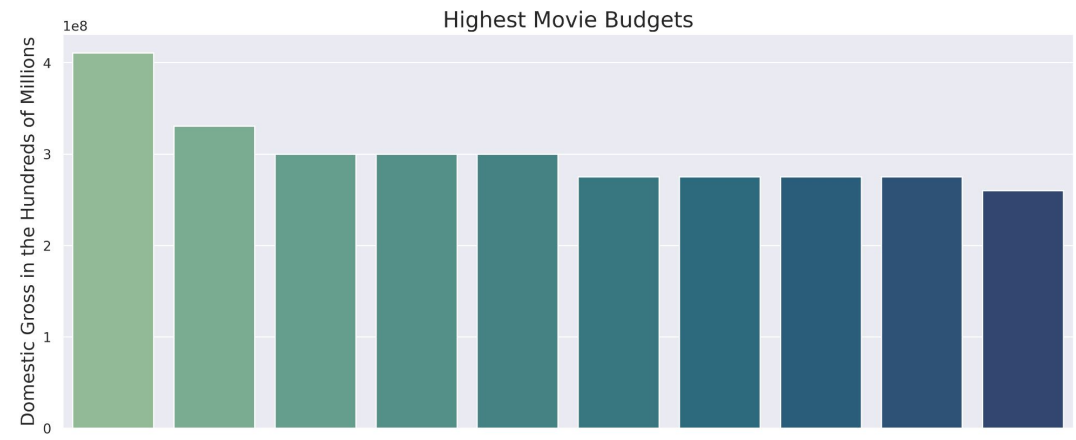
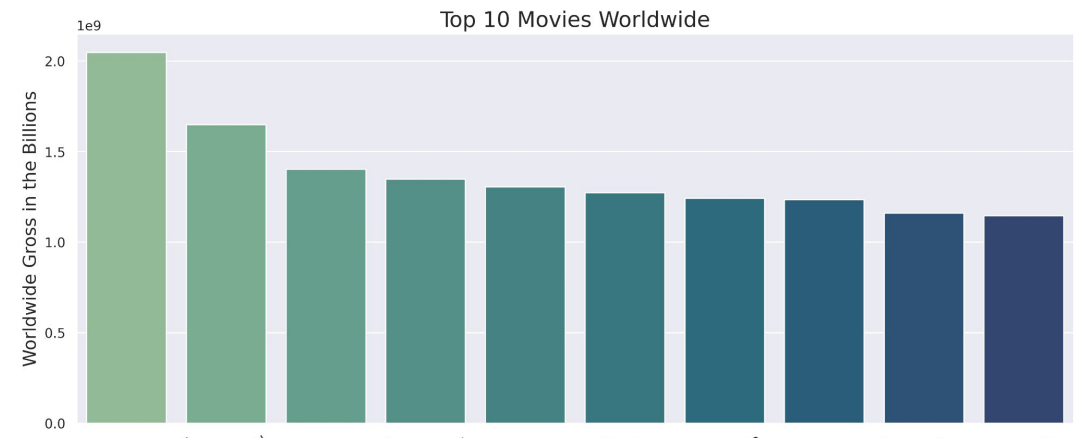


Top 10 Domestic Movie sales

- 1. **Black Panther**
Action, Adventure, Sci-Fi
- 2. **Avengers: Infinity War**
Action, Adventure, Sci-Fi
- 3. **Jurassic World**
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- 4. **Incredibles 2**
Action, Adventure, Animation
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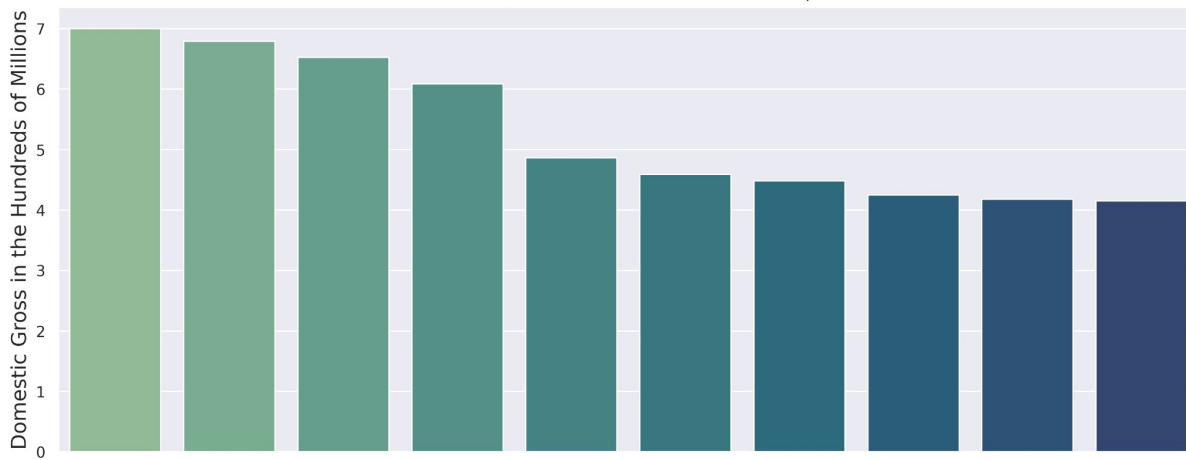
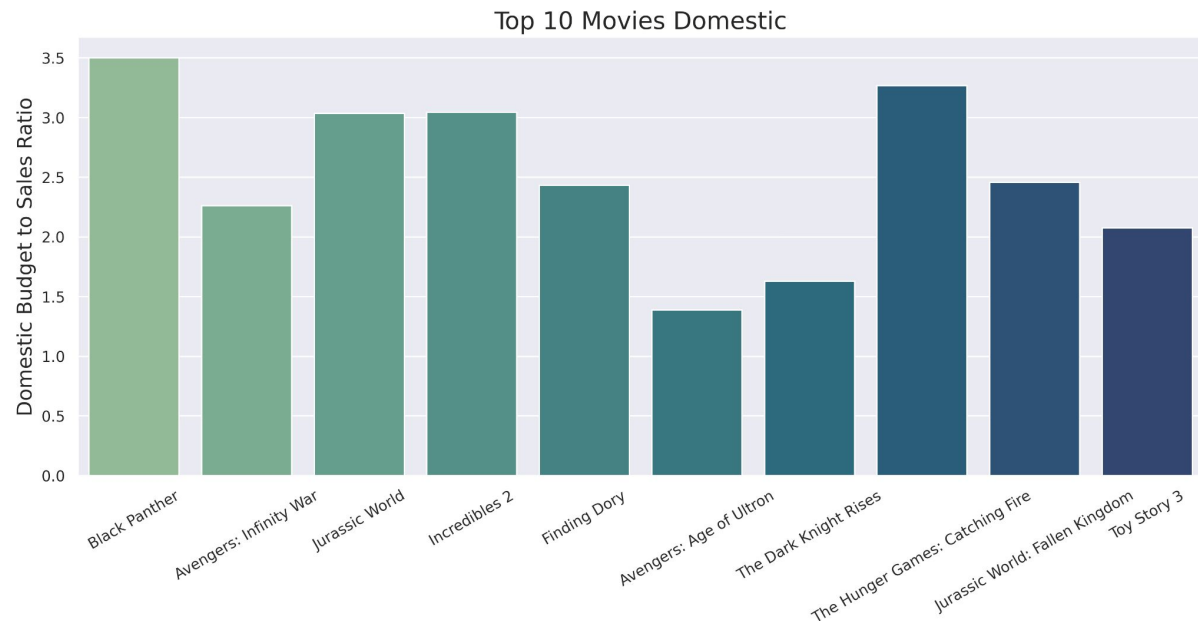
Top 10 Worldwide Movie sales

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- 2. **Jurassic World**
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Results

Top 10 Movies:

Budget-to-Gross ratio

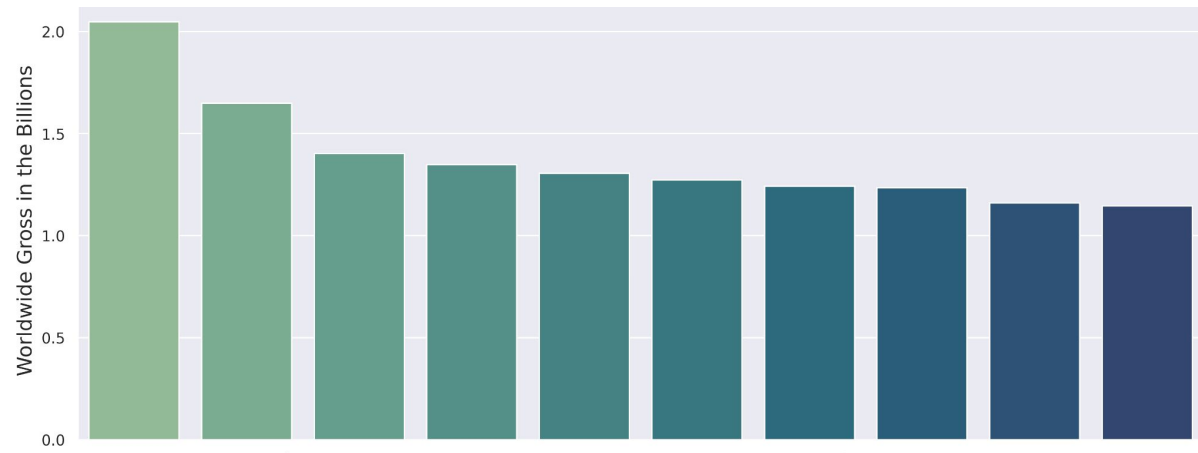
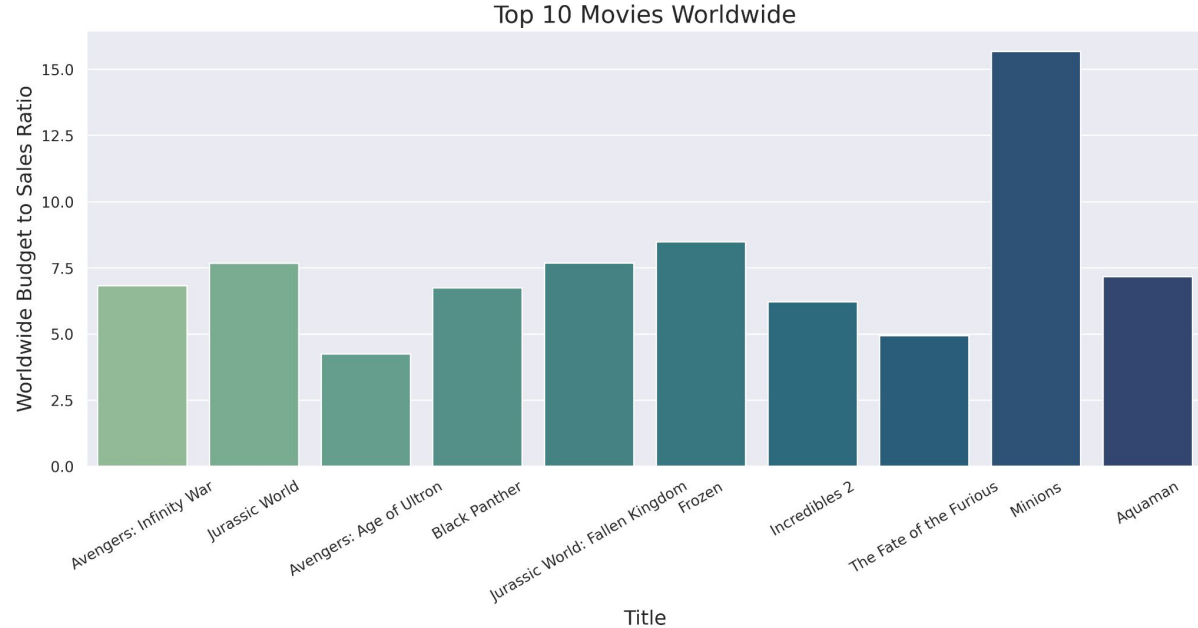


The most successful movies maintain a return of 1.5 or higher, by domestic metrics.

Results

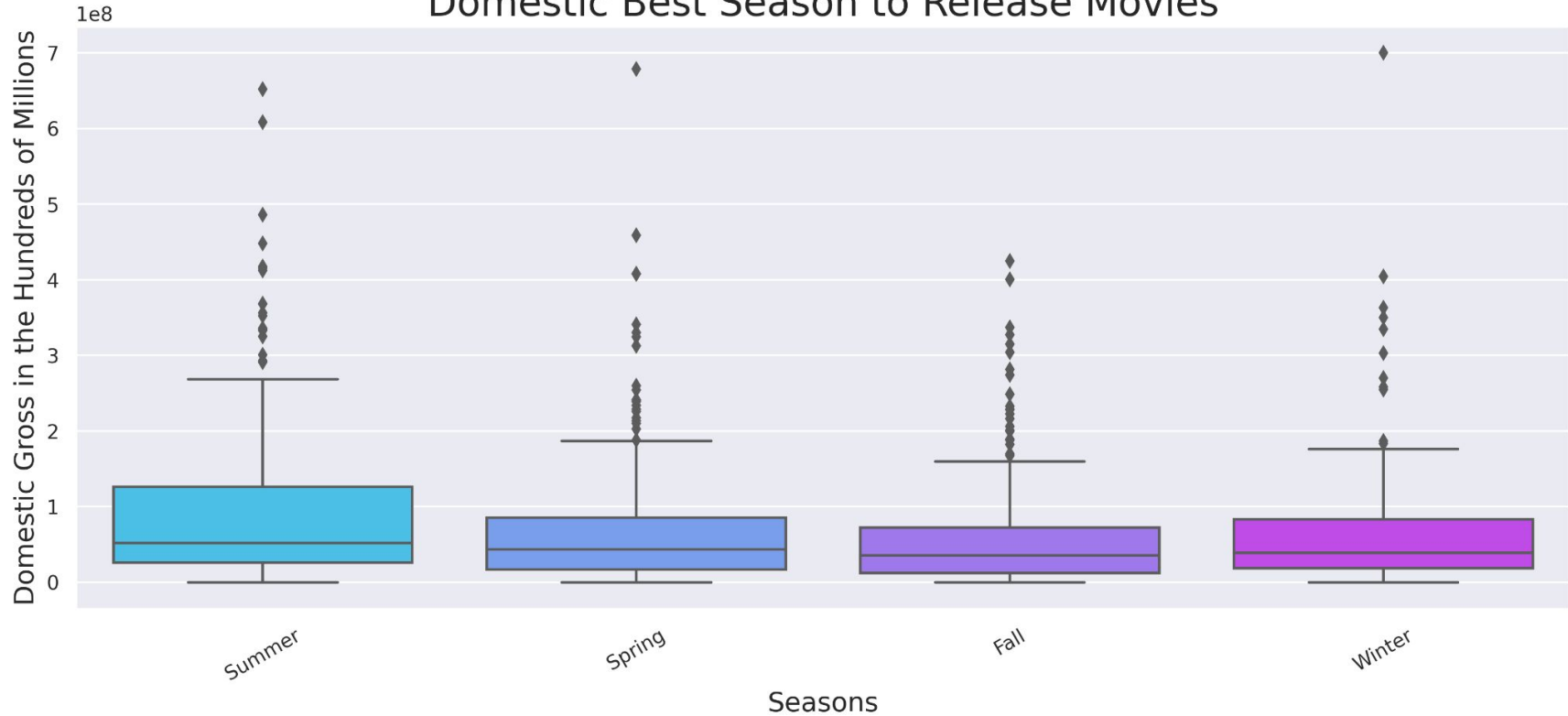
Top 10 Movies:

Budget-to-Gross ratio



By worldwide metrics, the most successful movies maintain a return of 4.0 or higher ratio.

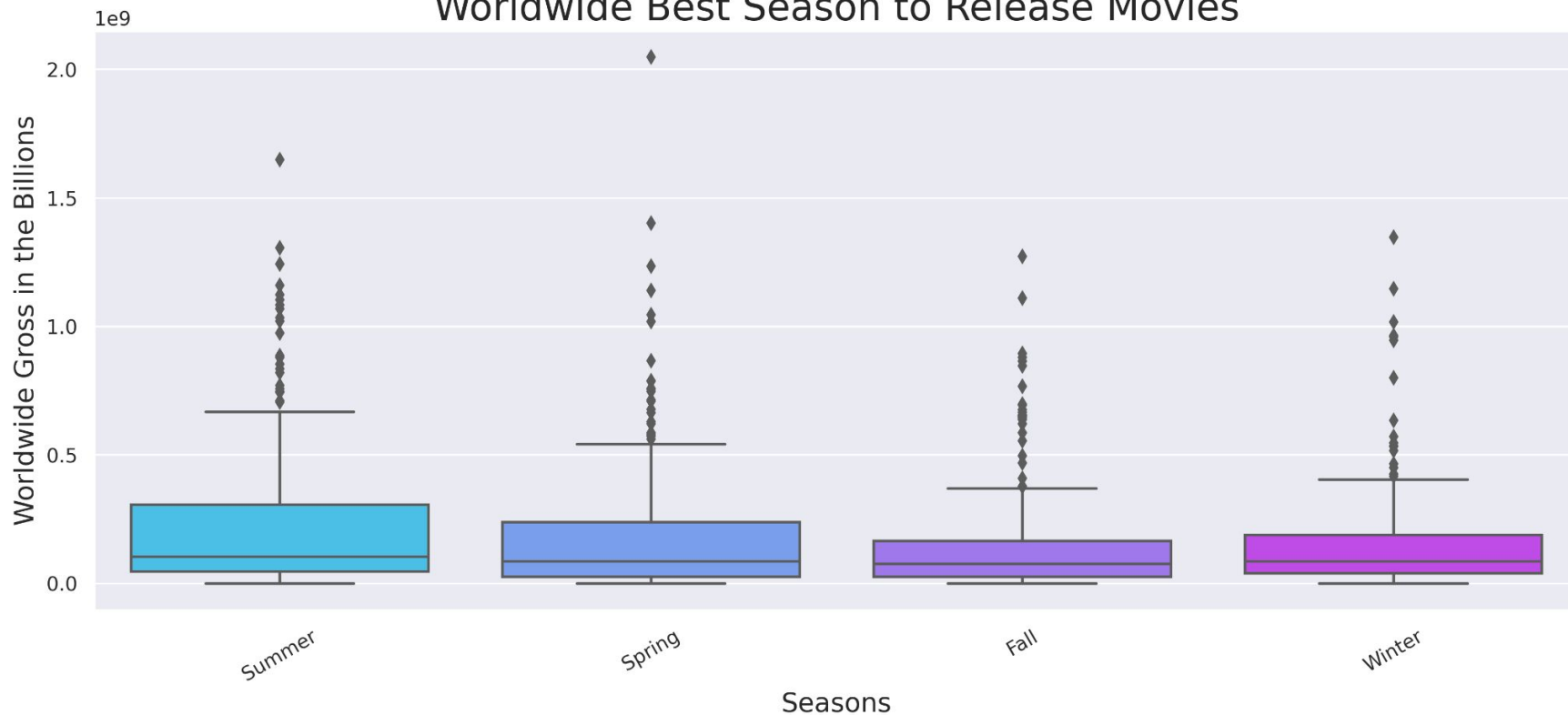
Domestic Best Season to Release Movies



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Conclusions

- Action, Adventure, and Sci-Fi movies completely dominate domestic and worldwide metrics.
- In contrast, Documentary movies perform the least well everywhere.
- Western & Fantasy movies may be a challenge as well. Since they garner a similar amount of returns as the overall cost of the budget, on average.
- Adventure movies can be the most rewarding. Out of the top movie sales, Sci-Fi had the lowest budget output
 - Animation movies have a similar outlook

Conclusions

- High Budget doesn't necessarily equal high grossing film
- Summer is the overall best season
 - Spring and Winter have comparable and some better outlier high grossing films to summer
- Movies like Jurassic World can be a case study.
 - A Lower budget, despite massively successful gross metrics & returns

Next Steps

Further analyses could yield additional insights to further improve movie creation at Microsoft's movie studio:

- Curating a movie that benefits from multiple genre entries.
- Looking into the best resources we can use (writers, filmmakers, sound, etc), in order to create our movie.
- Predict undesirable outcomes. This modeling could identify movies that are more likely to have undesirable box office sales, based on shareholder requirements.



Questions?

Thank You!

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