

Microsoft Studios

Exploratory Data Analysis





Data And Assumptions

Data Sources

- **The-Numbers:** A website that provides financial data for movies
- **IMDB:** An online movie database that provides descriptive data about movies

Assumptions

- **Spring** is defined as April and May
- **Summer** is defined as June, July, August, September
- **Fall** is defined as October and November
- **Winter** is defined as December, January, February, March
- **Total Profit** is equal to Worldwide Gross minus Production Budget



Question 1: What genres of movies are the most profitable?

Top Genres by Count

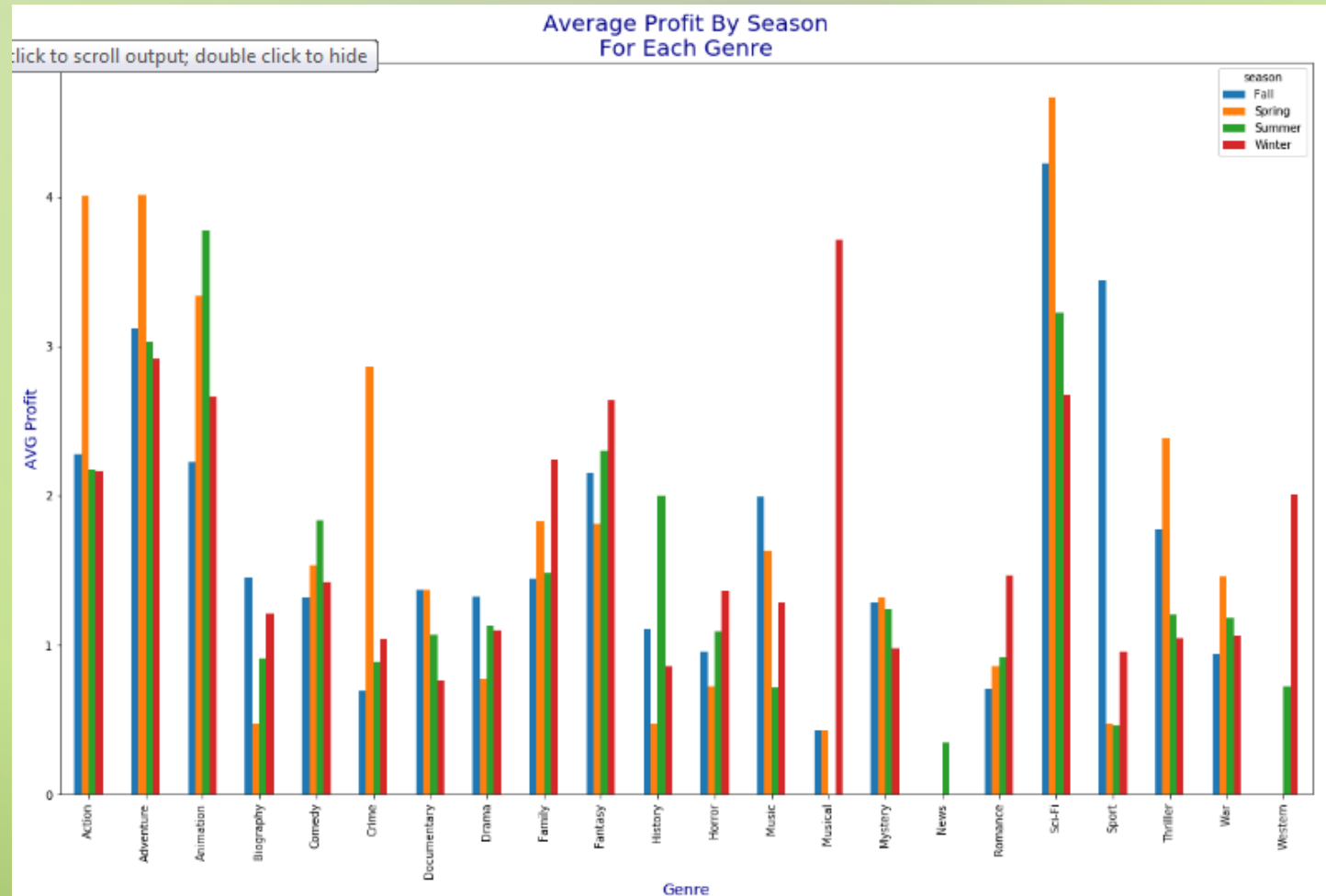
- Drama
- Action
- Comedy
- Adventure


Top Genres by Profit

- SciFi
- Adventure
- Animation
- Action

- Drama movies appeared most in the Top 1000 movies but average profit was low
- SciFi movies were most profitable but there were not many SciFi movies in the top 1000 movies
- Would recommend making Adventure movies based on them having the second highest profit, while still appearing in the Top 1000 movies at a good rate

Question 2: What time of year should individual genres be released?





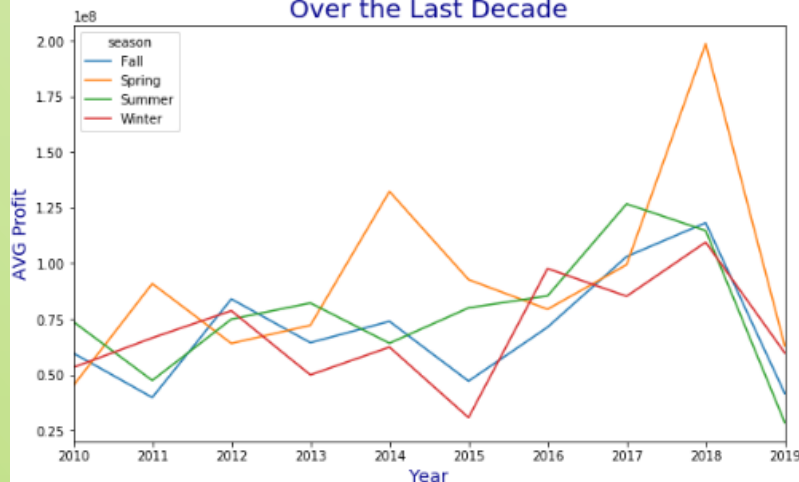
Question 2: What time of year should individual genres be released?

Season in which each genre performed best

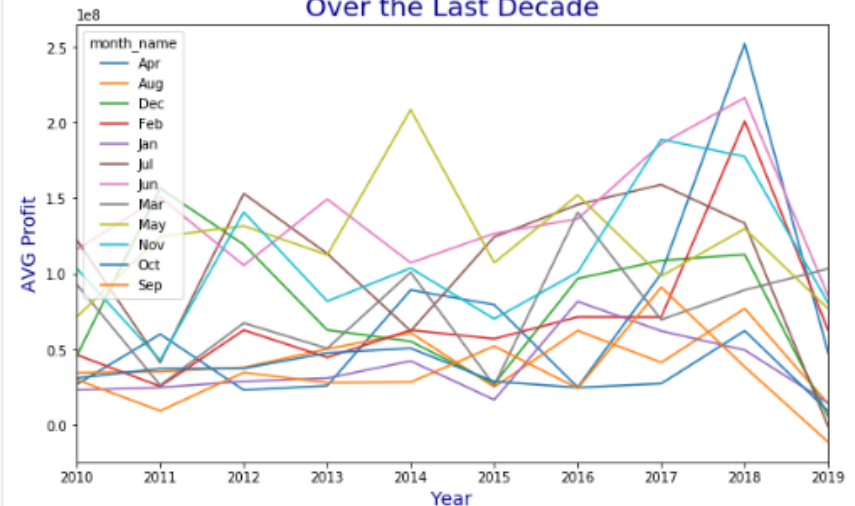
- Spring: Action, Adventure, Crime, Mystery, SciFi, Thriller, War
 - Summer: Animation, Comedy, History
 - Fall: Biography, Documentary, Drama, Music, Sport
 - Winter: Family, Fantasy, Horror, Musical, Romance, Western
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- When making an Adventure movie, release in the Spring


Question 3: What time of year do movies overall tend to perform best over the last decade?

Average Profit By Season
Over the Last Decade



Average Profit By Month
Over the Last Decade





Question 3: What time of year do movies overall tend to perform best over the last decade?

Top 3 months by year

- 2010: July, June, November
- 2011: December, June, May
- 2012: July, November, May
- 2013: June, July, May
- 2014: May, June, November
- 2015: June, July, May
- 2016: May, July, March
- 2017: November, June, July
- 2018: April, June, February
- 2019: March, June, November

Top seasons by year

- 2010: Summer, Fall, Winter, Spring
- 2011: Spring, Winter, Summer, Fall
- 2012: Fall, Winter, Summer, Spring
- 2013: Summer, Spring, Fall, Winter
- 2014: Spring, Fall, Summer, Winter
- 2015: Spring, Summer, Fall, Winter
- 2016: Winter, Summer, Spring, Fall
- 2017: Summer, Fall, Spring, Winter
- 2018: Spring, Fall, Summer, Winter
- 2019: Spring, Winter, Fall, Summer

- Spring is the most successful time of year for releasing movies based on having the highest profit for 5 of the last 10 years
- Release Spring movies in May, Summer movies in June/July, Fall movies in November, Winter movies in March



Recommendation

- Genre: Adventure
- Season: Spring
- Month: May



Future Steps

- Analyze which actors/actresses star in the most successful movies
- Analyze which directors most create the most successful movies

THANK YOU FOR YOUR TIME

QUESTIONS?

