

Film Analysis

FOR THE MICROSOFT BOARD OF DIRECTORS

Flatiron School Data Science Phase 1 Project

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Student Pace: Flex pace

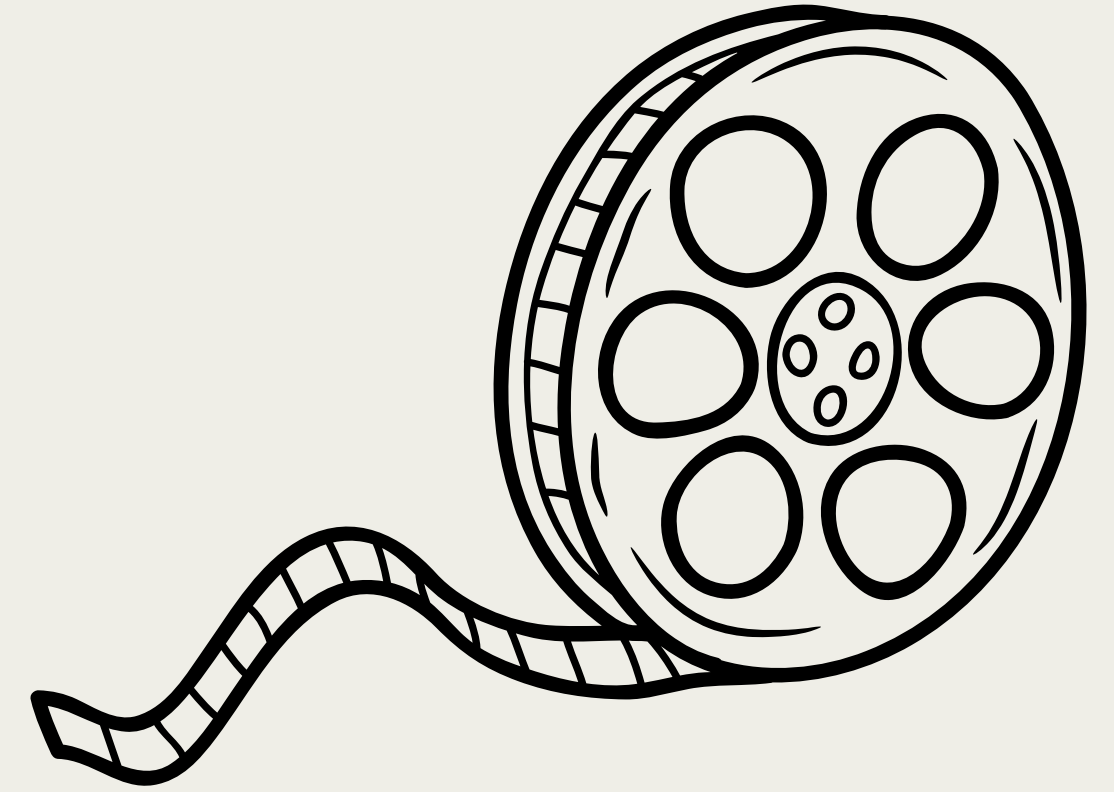
Instructors: Morgan Jones, Mark Barbour

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Project Objective:

- Explore film industry insights across diverse budget categories
- Provide strategic recommendations for Microsoft's potential entry into film production.



Key Areas Covered:

Genre Recommendations

Seasonal Release Trends

Staff Recommendations by Budget Bracket

B u s i n e s s U n d e r s t a n d i n g

Purpose:

- Analyzing movie industry data to drive Microsoft's film industry entry.
- Identifying critical success factors for box office performance.

Stakeholders:

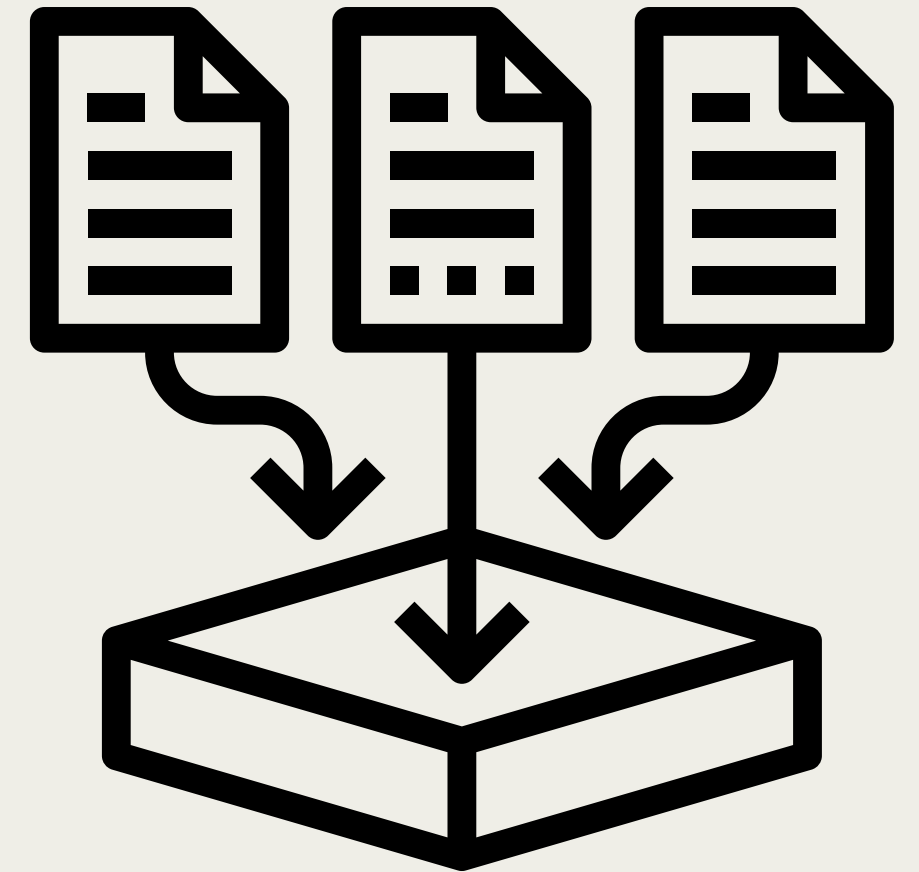
- Microsoft's Board of Directors

Significance:

- Empowering decisions on genres, directors, and movie success strategies. Guiding Microsoft's strategic direction in the film industry.

Data Sources:

- Box Office Mojo
- IMDb
- Rotten Tomatoes (movie info)
- Rotten Tomatoes (reviews)
- Movie DB
- The Numbers



These sources varied in size and content, covering movie details, financial data, ratings, and reviews.

Data Collection & Preprocessing

Steps Taken:

- Explored file contents.
- Extracted required data.
- Created Pandas DataFrames.
- Explored IMDb tables via SQL.

Challenges:

- Diverse file formats needed specific extraction methods.
- Navigating SQL databases needed extra steps.



Data Cleaning and Frame Merging

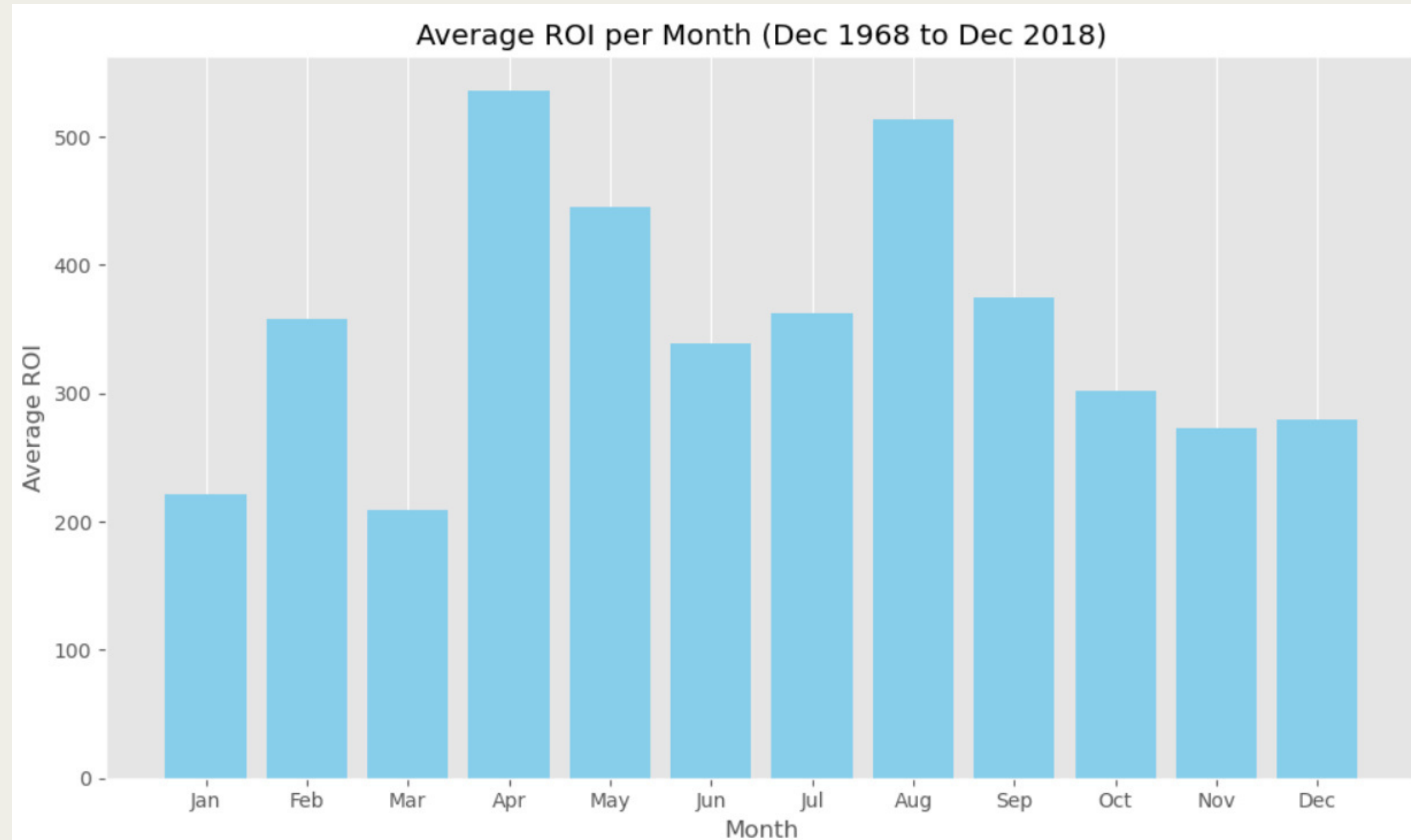
Cleaning and Merging:

- Unified multiple datasets into a single DataFrame.**
- Calculated Net Profit and ROI for films.**

Budget Categories and Genre Analysis:

- Categorized films into three sections:
Lower, Middle, and Higher budget bracket.**
- Identified top three genres with the best ROI in each budget category.**

Best Months for Film Release:



**Average Return
on Investment
(ROI) per month,
over the entire
time scope our
our data
(1968 to 2018)**

Recommendations by Budget Bracket I

Lower Budget (1 Million to 15 Million US\$)

Genre Recommendations

Best Recommendation: Comedy, Romance, Sport

Second Recommendation: Drama, Fantasy

Third Recommendation: Horror

Seasonal Recommendations

Best Recommendation: February

Second Recommendation: August

Third Recommendation: May

Staff Recommendations

Director, Actor, Camera Department: Levan Gabriadze

Miscellaneous, Production Manager, Producer: Jamie Buckner

Producer, Writer, Cinematographer: Tom Boyle

Recommendations by Budget Bracket II

Middle Budget (15 Million to 50 Million US\$)

Genre Recommendations

Best Recommendation: Horror, Mystery, Thriller

Second Recommendation: Action, Sci-Fi, Thriller

Third Recommendation: Comedy, Fantasy

Seasonal Recommendations

Best Recommendation: July

Second Recommendation: November

Third Recommendation: January

Staff Recommendations

Director, Producer, Actress: Sam Taylor-Johnson

Writer, Music Department, Producer: Seth MacFarlane

Actor, Producer, Animation Department: Conrad Vernon

Recommendations by Budget Bracket III

Higher Budget (Above 50 Million US\$)

Genre Recommendations

Best Recommendation: Biography, Drama, Music

Second Recommendation: Action, Biography, Drama

Third Recommendation: Adventure, Drama, Sport

Seasonal Recommendations

Best Recommendation: April

Second Recommendation: June

Third Recommendation: July

Staff Recommendations

Director, Animation Department, Visual Effects: Kyle Balda

Animation Department, Director, Writer: Chris Buck

Writer, Miscellaneous, Producer: Jennifer Lee, Jared Bush

Thank You For Your Time and Attention

*Thank
you!*

**Any Questions or Further Information Needed,
Please Feel Free to Contact Us**