Summary

Descriptive analysis of online movie datasets reveals three key trends in the movie industry that can help guide studio business strategy:

- Which months of the year return the highest sales and profits

- Whether longer or short movies return higher sales and profits

- Which genres return the highest sales and profits

Outline

Business Problem

Data & Methods

Results

Conclusions

Business Problem

To maximize sales & profit on our movie investment, we seek to identify the following:

- Optimal month or season to release the movie

- Optimal genre(s) of the movie
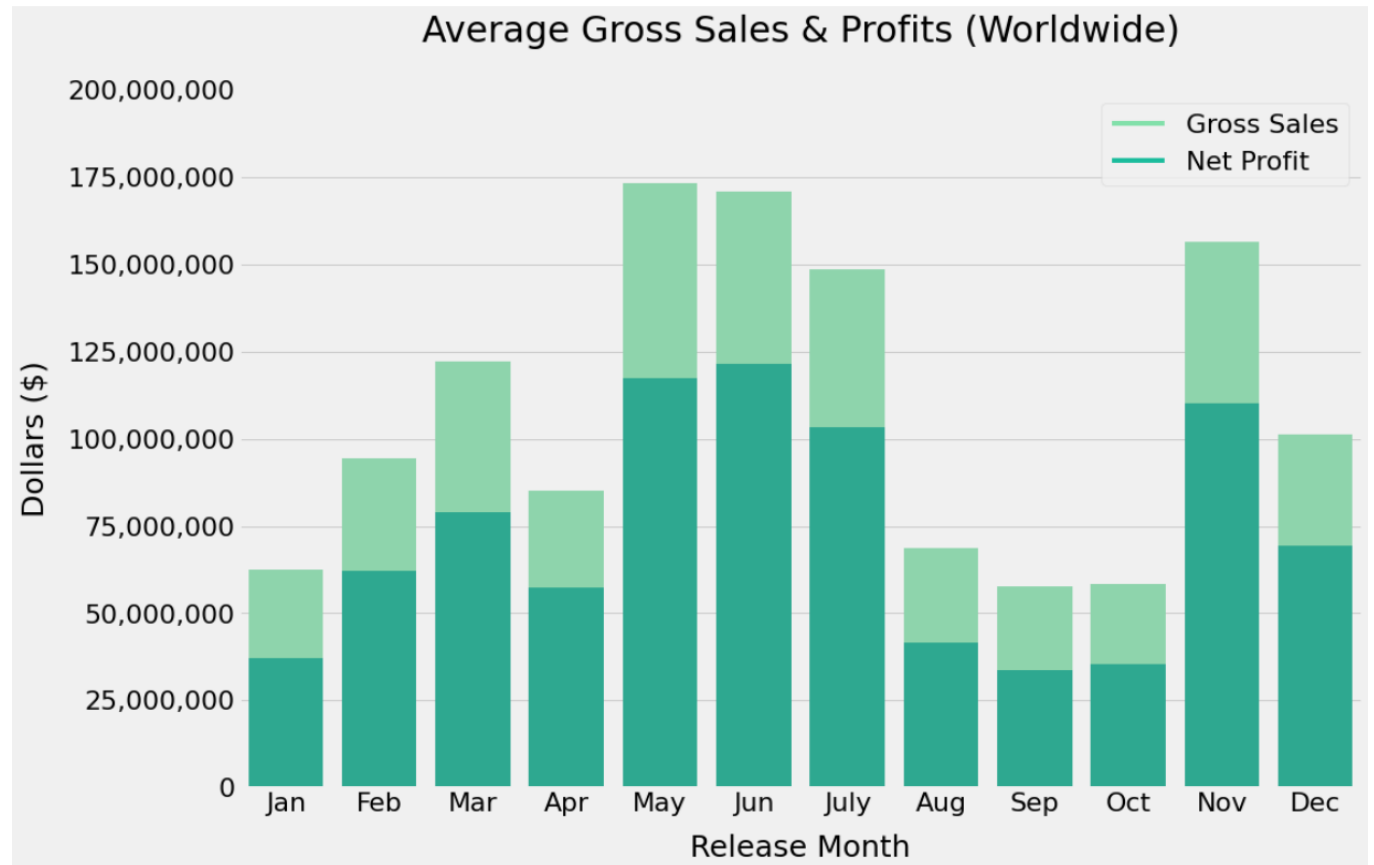
- Optimal length of the movie

Data & Methods

- Online datasets from two popular movie sites: IMDb.com and The-Numbers.com include:

  - IMDb: title, release date, genres, runtime

  - The-Numbers: production budget, domestic and worldwide gross

- Analyzed 2427 titles from 1915 to 2019

- Net profit calculated by subtracting the production budget from the worldwide gross sales

	original_title	release_date	production_budget	domestic_gross	worldwide_gross	runtime_minutes	genres
0	#Horror	2015-11-20	$1,500,000	$0	$0	101.00	Crime,Drama,Horror
1	10 Cloverfield Lane	2016-03-11	$5,000,000	$72,082,999	$108,286,422	103.00	Drama,Horror,Mystery
2	10 Days in a Madhouse	2015-11-11	$12,000,000	$14,616	$14,616	111.00	Drama
3	12 Rounds	2009-03-27	$20,000,000	$12,234,694	$17,306,648	nan	Action,Drama,Romance
4	12 Strong	2018-01-19	$35,000,000	$45,819,713	$71,118,378	130.00	Action,Drama,History

Results

- The most profitable months are May, June, July, and November

Average Gross Sales & Profits (Worldwide)

Results

- The most profitable season (or quarter) is Summer (Q2)

Average Gross Sales & Profits by Season

Legend:
- Gross Sales
- Net Profit

Y-axis: Net Profit ($) — 0, 20,000,000, 40,000,000, 60,000,000, 80,000,000, 100,000,000, 120,000,000, 140,000,000, 160,000,000

X-axis: Season (Quarter) — Spring (Q1), Summer (Q2), Fall (Q3), Winter (Q4)
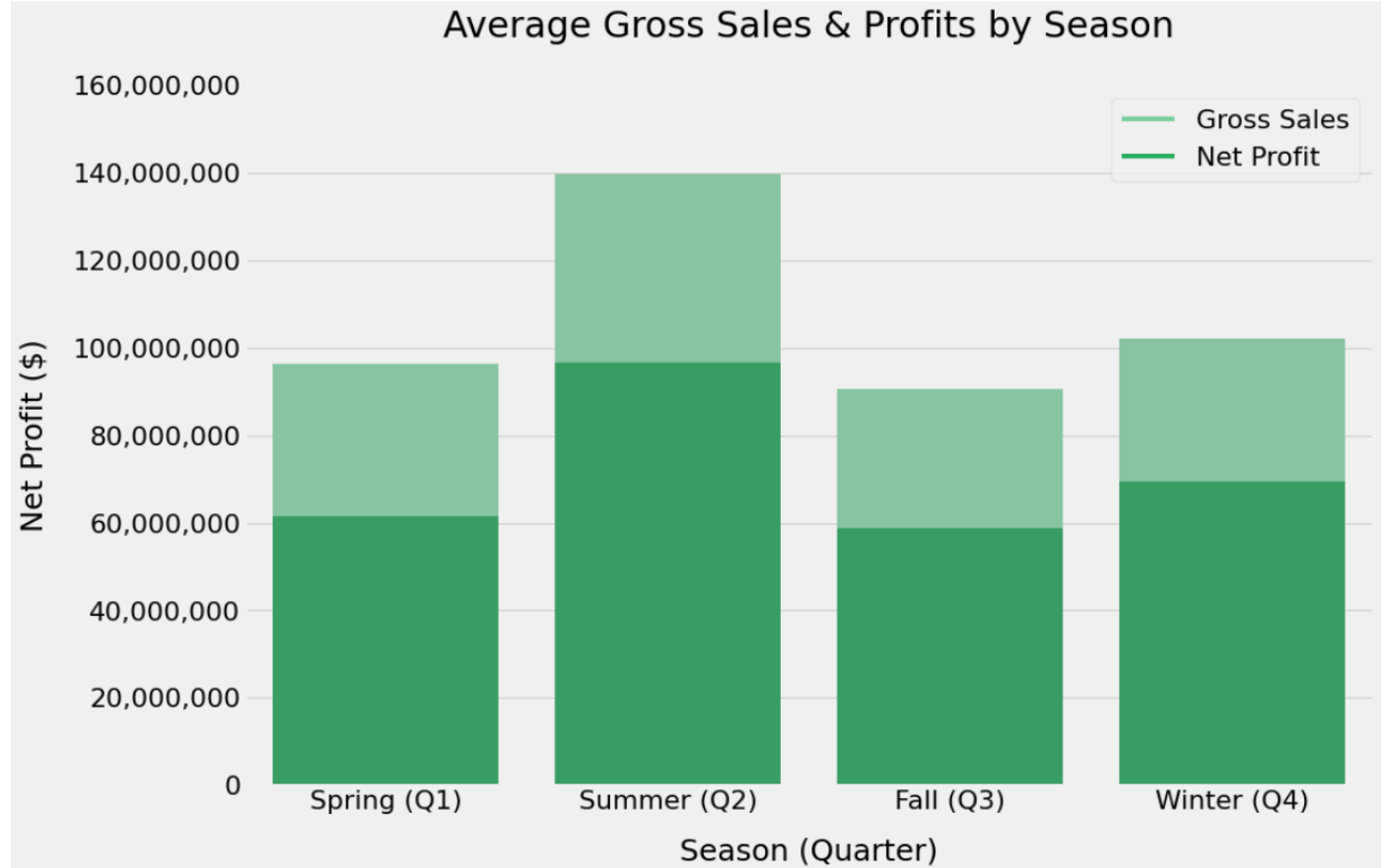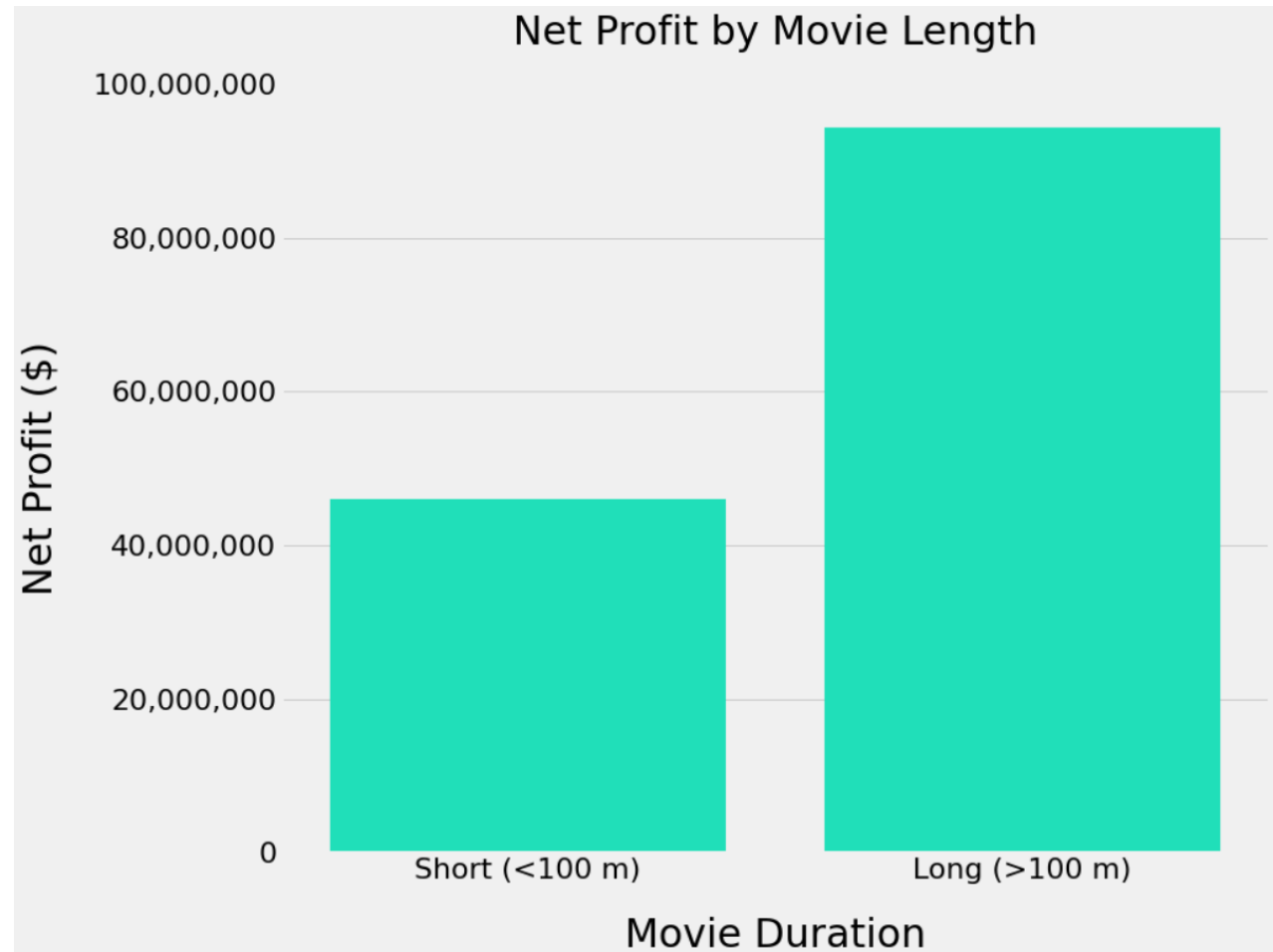
Results

- The most profitable genres are Animation, Adventure, Sci-Fi, Musical, Fantasy, Action, and Family

- The least profitable genres are War, History, Documentary, Western and News
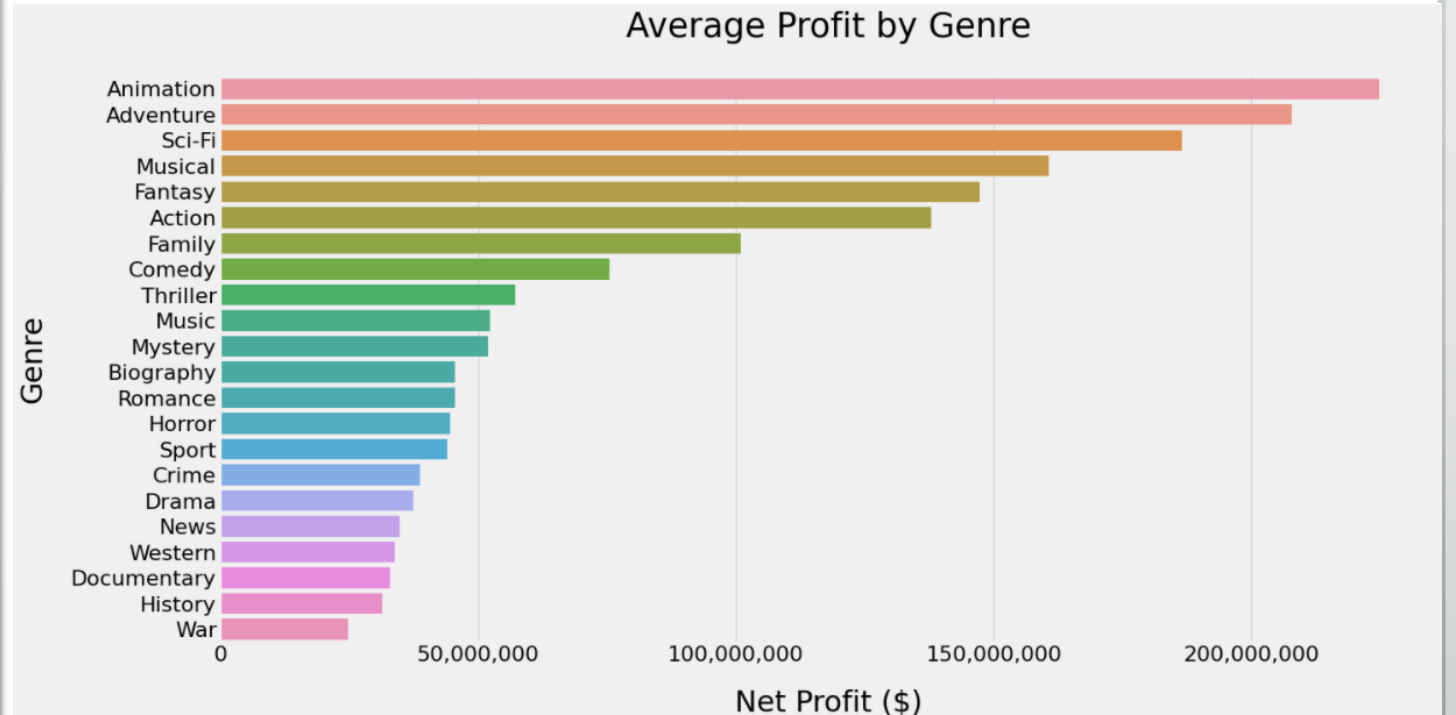
Results

- Longer movies (over 100 minutes) were found to be twice as profitable on average as shorter movies

Conclusions

- **Target the months of May-July and November**
- **Aim for fiction genres with escapist content (e.g. Adventure, Animation, Sci-Fi)**
- **Aim to produce lengthy movies (above 100 minute running time)**

Next Steps

- **Conduct a more fine-grained analysis of release time data.**
- **Further explore the relationship between release time, genre, and length.**
- **Model impact of franchise status on profit measures.**

Thank you! :-)

- Email: chris@choi.is
- GitHub: @UnityPSY
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