



Impact of Brand Recognition on Movie Theater Reviews

Backgrounds → Data Acquisition & Analysis Process → Outputs & Discussion

DS 4002 Group 18: C.E.L.L

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Project Details

➤ Motivation

- Understanding the role of brand recognition in consumer perception to help inform business decision-making and marketing behaviors

➤ Goal

- To determine if larger movie theater chains correlates with higher and more positive reviews than smaller chains

➤ Hypothesis

- The **sentiment polarity score** and the **average star rating** of larger movie theater brands will be rated significantly higher than those of medium and smaller movie theater brands.

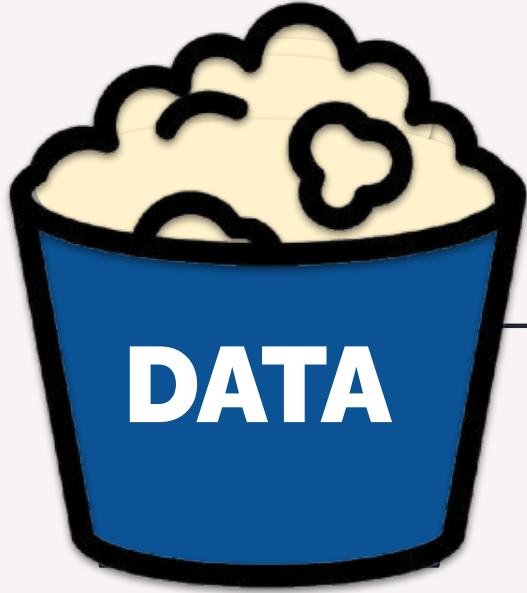
➤ Research question

- How does the size of the movie theater chain influence the number, average ratings, and sentiments of their reviews?

➤ Modeling approach

- Sentiment analysis with TextBlob and correlation

DATA EXPLANATION & ACQUISITION



**Regal
Cinema**

Large Movie
Theater Chain



**Alamo
Drafthouse**

Medium Movie
Theater Chain



Violet Crown

Small Movie
Theater Chain

SUMMARIZED DATA



Regal Cinema

1614 Reviews

66% Local Guides

4.3 Average Star
Rating



Alamo Drafthouse

2350 Reviews

63% Local Guides

4.5 Average Star Rating



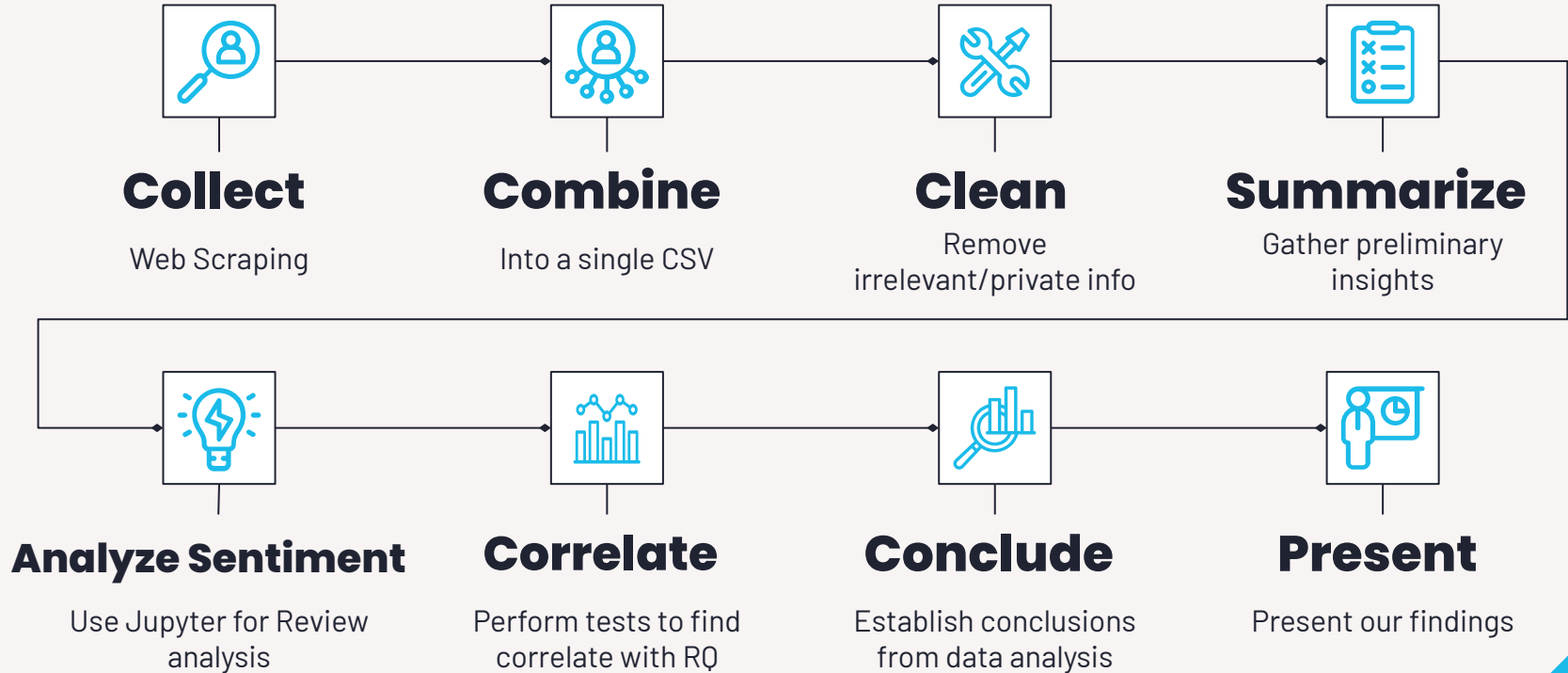
Violet Crown

941 Reviews

66% Local Guides

4.7 Average Star
Rating

ANALYSIS PLAN & JUSTIFICATION



TRICKY ANALYSIS DECISION



Scale

How many theaters do we consider?



Scrape Limit

Phantom only shows 1000 reviews...



Senti- ment

How can we consider sentiment for ratings that have no review?



Bias and Uncertainty



➤ Bias

- Personal connection to specific movie theaters and Charlottesville
- Reviews may not be a representative sample
 - Some people may only review if they feel very strongly about an experience.
 - Representative of only the most recent reviews, and not overall.
- Reviews only through Google

➤ Uncertainty

- TextBlob may misinterpret **nuanced language** (irony, sarcasm, etc.), emojis, and slang
- TextBlob may misinterpret theater sentiment with context
 - Ex. "The movie I watched was terrible, but the theater was great!"
 - Phantom could incorporate "terrible" into sentiment score
- Inconsistencies in star ratings due to lack of criteria
 - Reviewers thinking theater as perfect, but give 4 stars

Results & Conclusion

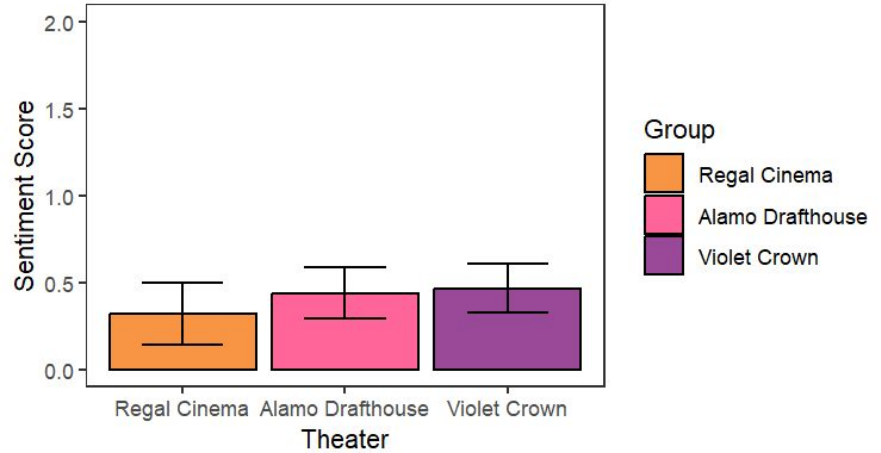
Star Rating

Every Theater Brand Means



Sentiment Score

Every Theater Brand Means



Hypothesis Conclusion

- Alamo Drafthouse (AD) **did not have significant star ratings** over Regal Cinema (RC) and Violet Crown (VC).
- AD has **significantly higher sentiment** scores than RC. And VC has **significantly higher sentiment** scores than RC.
- Final effect size for sentiment scores was **small-medium**.

Next Steps

➤ New Exploration and Improvements

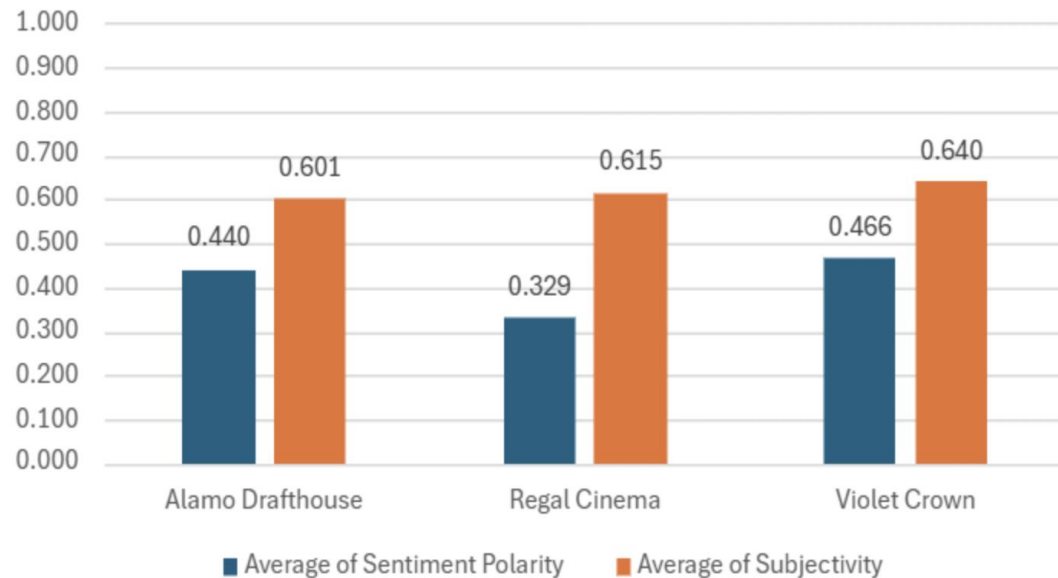
- Gather reviews from multiple platforms
 - Yelp, Trip Advisor, etc.
- Test different sentiment analysis for accuracy
 - VADR, Textblob, etc.
- Test more cities

➤ New Questions

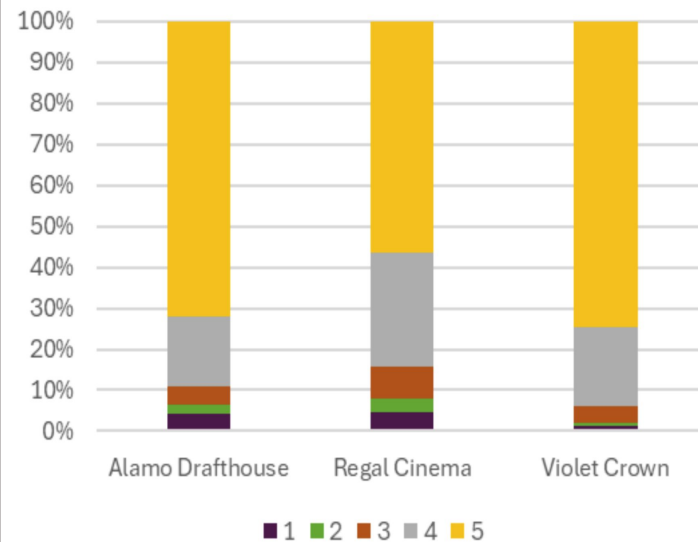
- Could ratings & reviews be influenced by a movie shown?
- How does reviewer's expectations differ between theater brand size?
- How does location influence star ratings & sentiment scores?
 - Rural vs city, east coast vs west coast, etc.

Questions?

Average Sentiment per Theater



Star Rating Ratio per Theater



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