



# 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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2025.2.18



# 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.

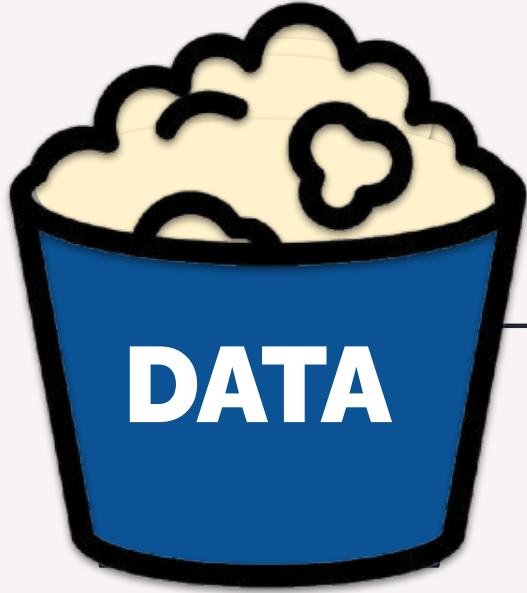
## ➤ Research question

- 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



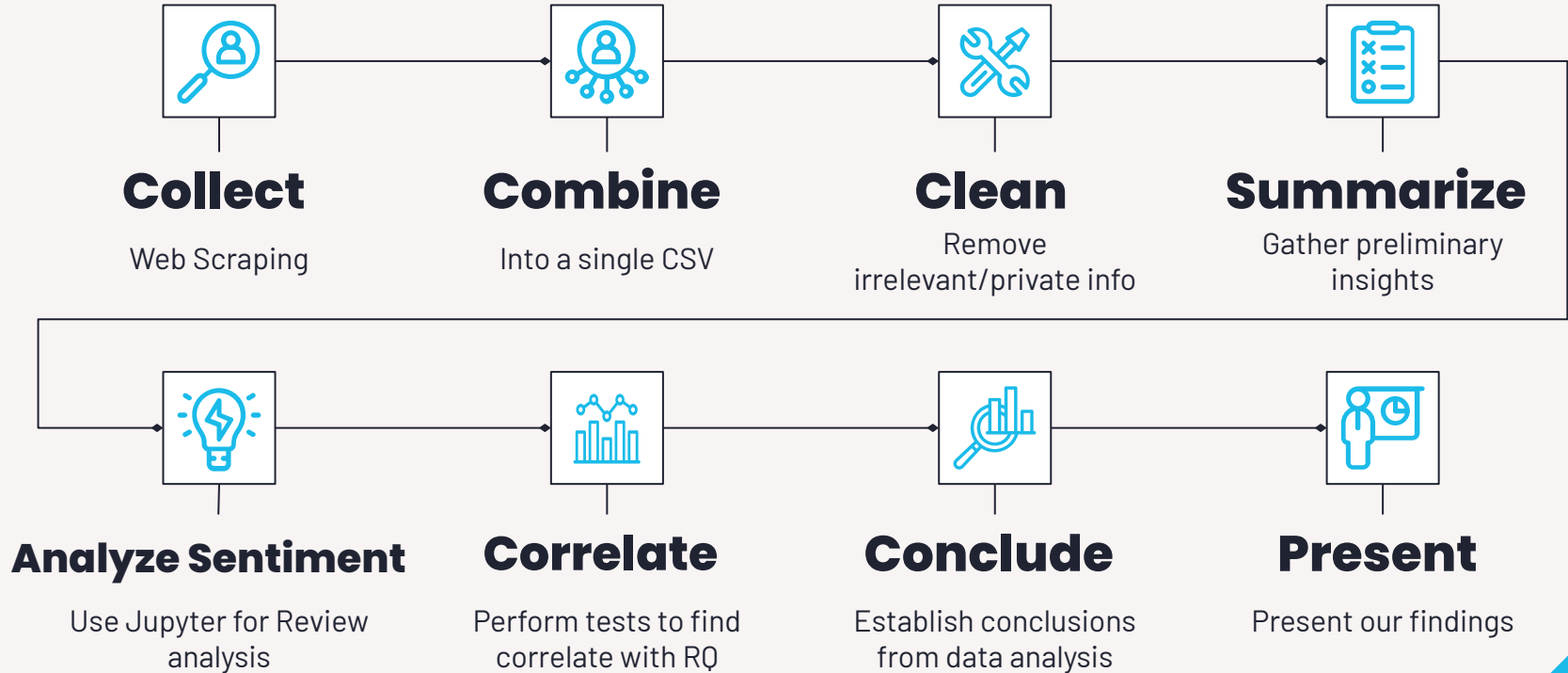
**Violet Crown**

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

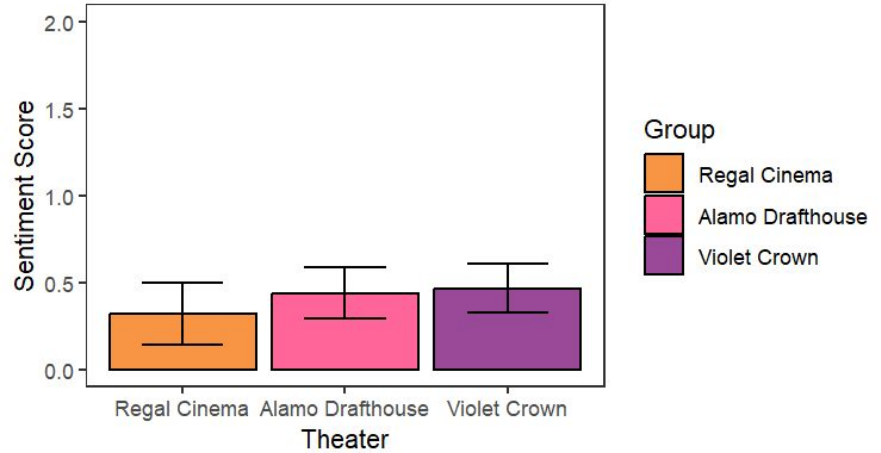
## Star Rating

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

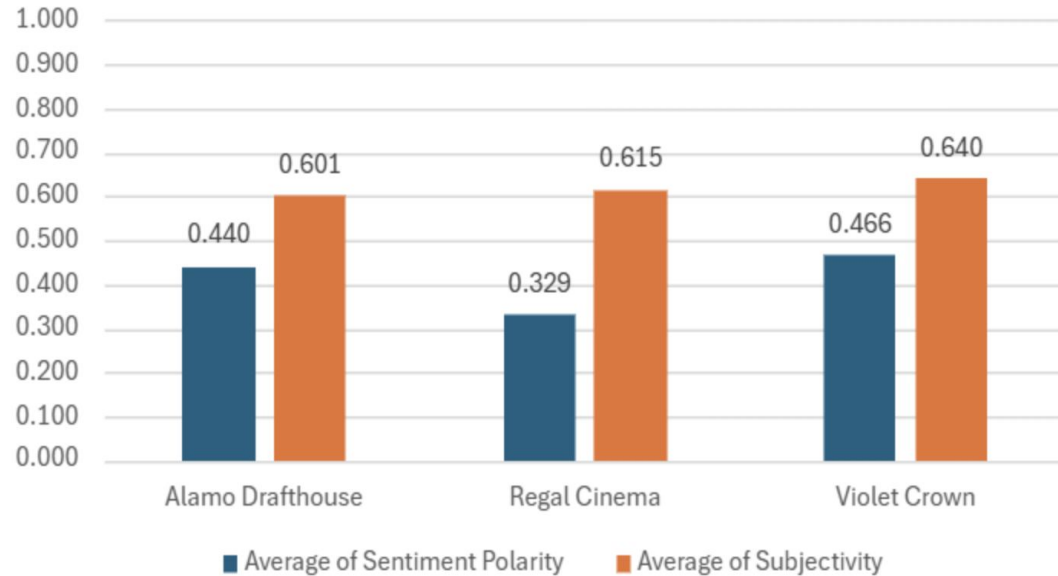
- Gather reviews from multiple platforms
  - Yelp, Trip Advisor, etc.
- Test different sentiment analysis for accuracy
  - VADR, Textblob, etc.
- Test more cities

## ➤ New Questions

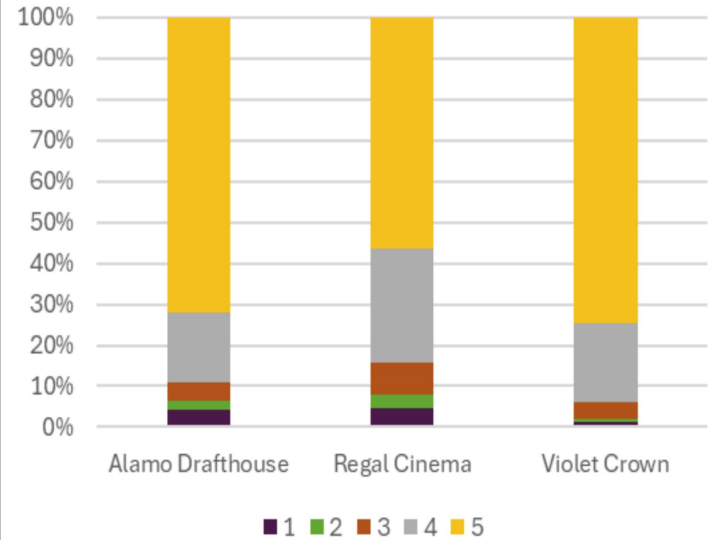
- Could ratings & reviews be influenced by a movie shown?
- How does reviewer's expectations differ between theater brand size?
- How does location influence star ratings & sentiment scores?
  - Rural vs city, east coast vs west coast, etc.

# Questions?

## Average Sentiment per Theater



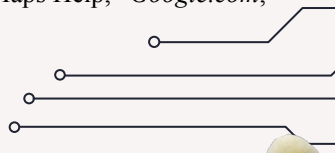


## Star Rating Ratio per Theater





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