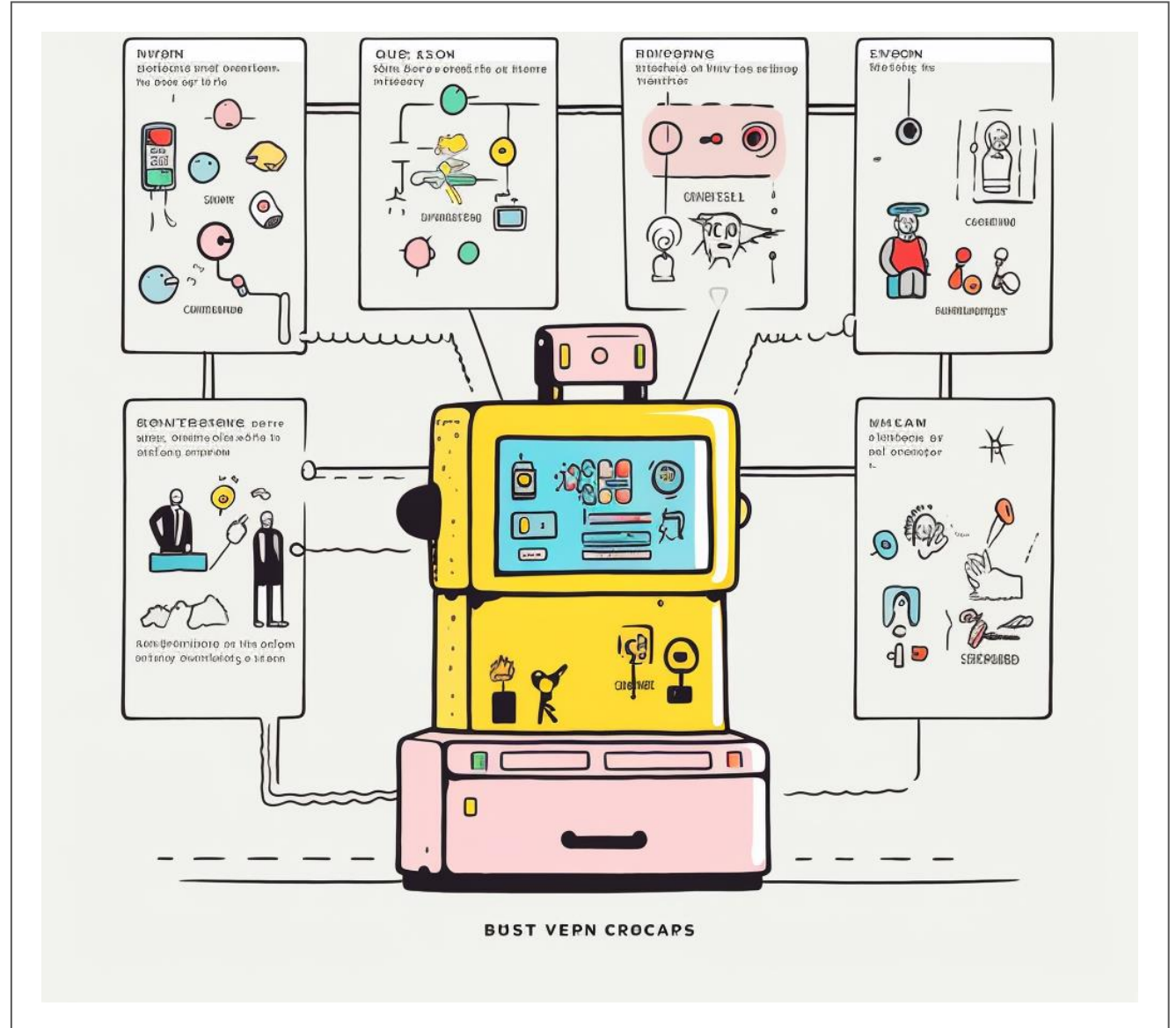


# Building a Better Game Review Analyzer

A Flatiron Phase 4 Project by  
Jordan Loewen-Colón



# Today's Agenda



Business Problem



Goals



Data



Methods

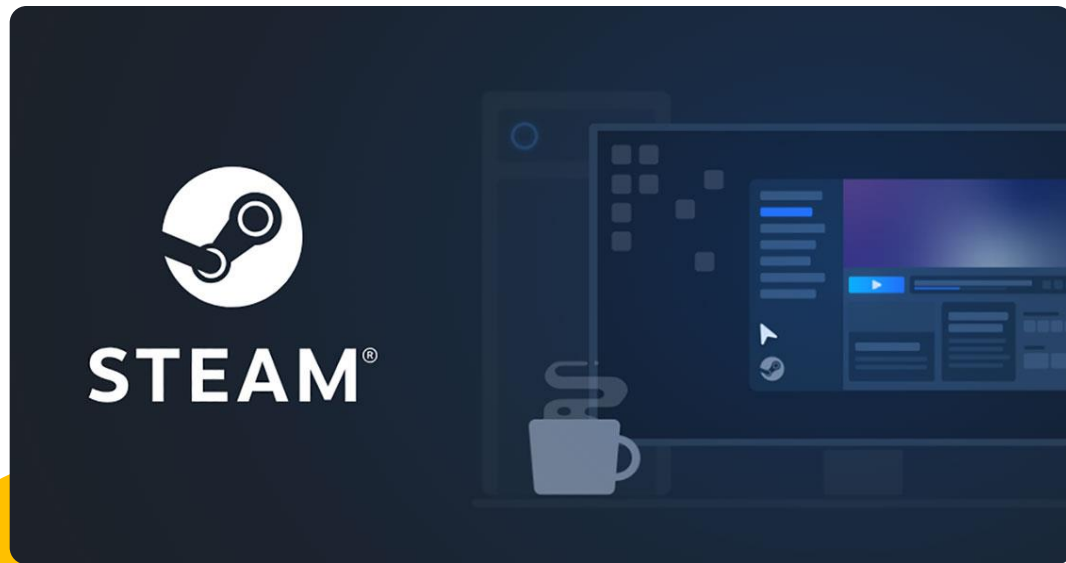


Results



## The Problem

SuperGiant Games wants more useful insights from player reviews on Steam. Steam's review system offers a binary recommendation, masking nuanced player feedback. Our project will analyze reviews, focusing on aspects like sound, action, story, visuals. Through sentiment analysis, we aim to identify what elements captivate players. This understanding will guide SuperGiant Games to create more successful, player-centric games.



# Primary Goals



## Develop

a sentiment analysis model that extends beyond binary evaluations to understand deeper nuances within player reviews.



## Aim

To shift from a mere yes/no system to a model that measures specific themes or topics of player interests.



## Focus

on key game aspects, such as sound, action, story, and visuals, to understand what elements engage players and define their gaming experience.



## STEAM REVIEWS

### Read, Rate, and Discuss

Now it's easy to see what other Steam users think about a product before you buy. With Steam Reviews, you can browse for reviews that others have found helpful, or write your own reviews for titles you've played on Steam.



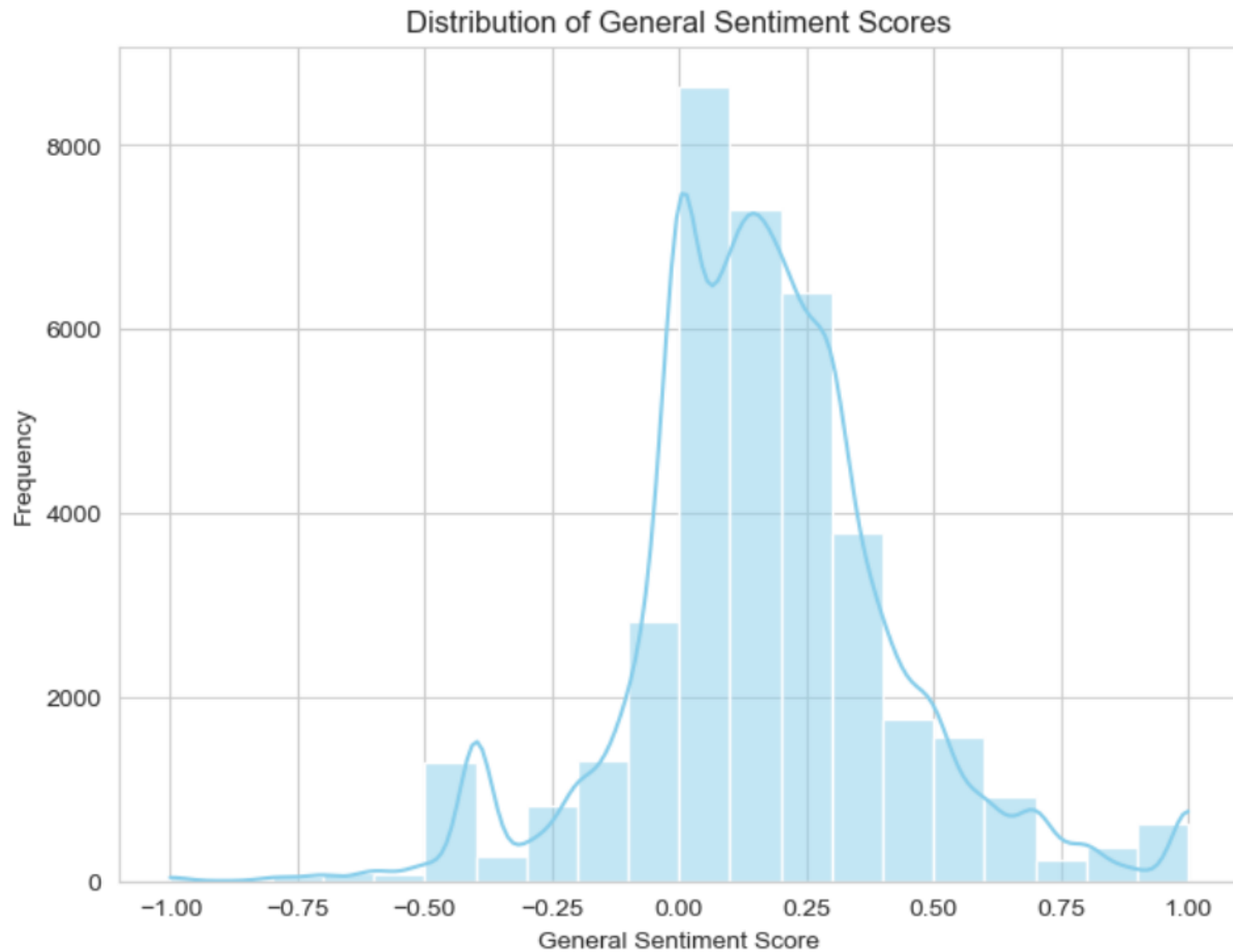
# The Data

- The dataset has 70k+ entries
- The reviews follow a simple binary rating system “voted up” or not.
- Other data points include:
  - Playtime
  - Purchase data
  - Whether the review is rated as “funny” by other players



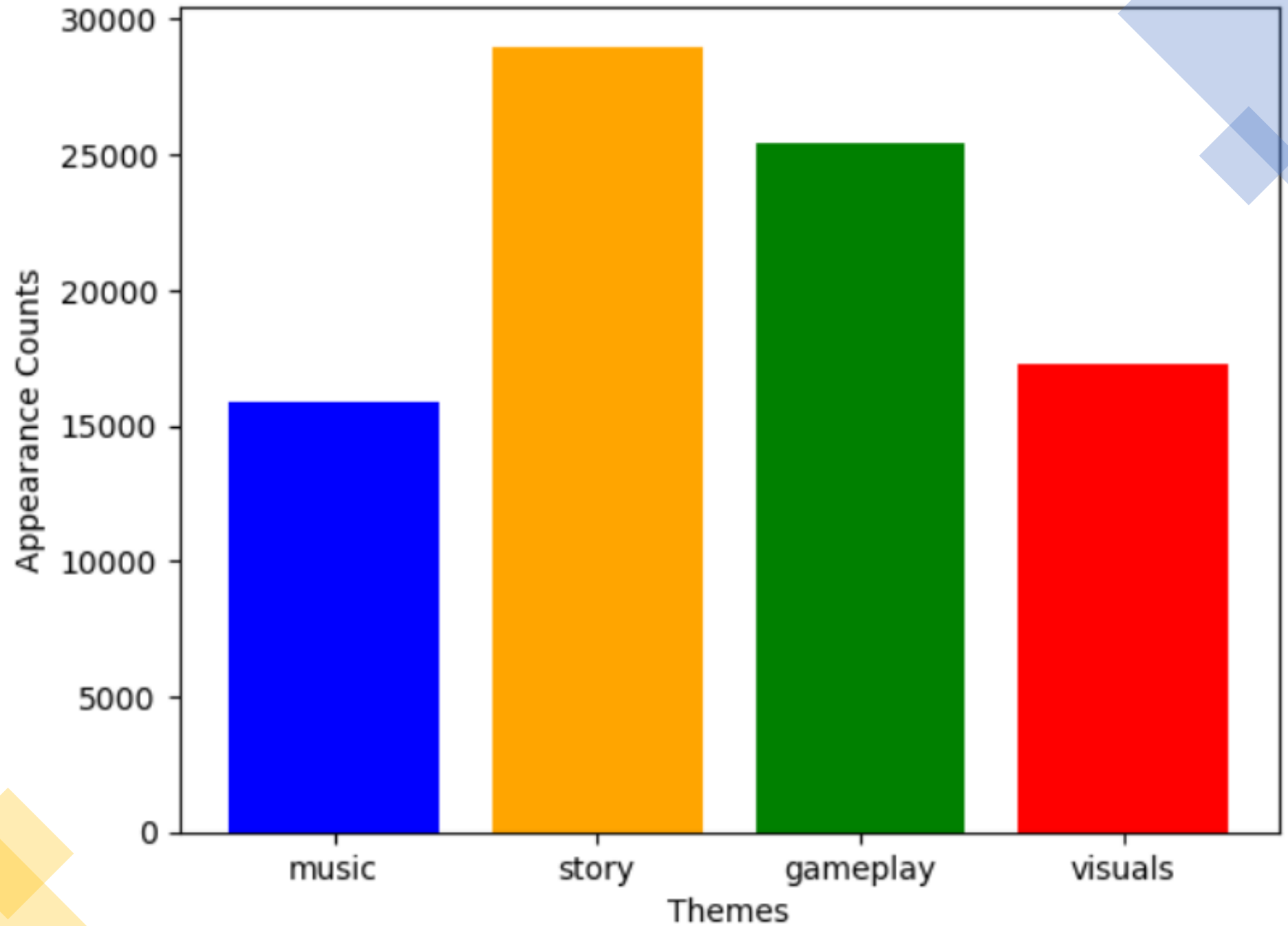
# Strategy

- Check the data for patterns
  - Can we build a model that predicts the length of a review based on play time?
  - Can our model accurately recognize the sentiments of a review (positive or negative?)
  - Can we build a model that can find underlying topic patterns in words?



- Each review was given a “sentiment” score between -1 and 1
- Higher scores means they used language that indicated more positivity
- The average sentiment score falls between 0 and .25, which is favorable!

Theme Appearances in Reviews



Counts of how many times players referenced a key word from a list of themes and synonyms.

Players were most likely to reference the story when writing reviews.

Generally, story references were rated more positively.



# TOP 5 BIGRAMS BY THEME

Music	Story	Gameplay	Visuals
Sound, track - 10	Side, quest - 9	Attack, pattern -13	Late, party - 9
Instead, audio - 12	Question, asked - 13	Power, ups - 8	Add, cart - 7
Audio, eargasm - 12	Family, drama - 11	El, combate - 9	Vibrant, color - 12
Musical, score - 12	Extended, family - 14	Power, creep - 10	Color, palette -12
Mass, effect - 10	Answer, question -14	Micro, transaction - 16	Farewell, earthly -15

# Review Sentiment Analyzer



**Review Length:** 95



**Review:** go one best game time . 10/10 everything : story , gameplay , difficulty , art , voice acting .



**Theme Words and Polarity**

**Music:** voice acting, 0.548

**Story:** story, 0.525

**Gameplay:** gameplay, 0.500

**Visuals:** art, 0.594

# Conclusions

reviews expressed positive sentiment within the range of 0 to 0.25.

In reviews emphasized story.

Reviewers may have limited vocabulary when describing their appreciation for the 'music' and 'visuals.'

# Recommendations



Focus on the strong storytelling elements.

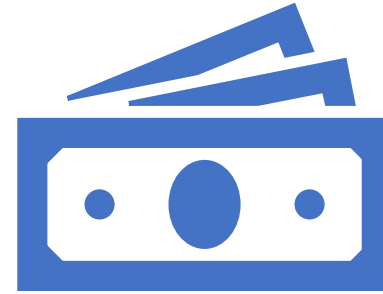


Help players express positive impressions of 'music' and 'visuals' by providing in-game prompts or specific key words or phrases.

# Concerns & Interest



Computational efficiency limited  
pattern recognition



Findings indicate there is value in  
further study!

# Thank You

---

Jordan Loewen-Colón  
jbloewen@syr.edu

