Introduction

This project investigates public sentiment around nostalgic TV show reboots using YouTube comment data. Shows analyzed include Velma, Teen Titans, Ben 10, Adventure Time: Fionna and Cake, Powerpuff Girls, Rugrats, Animaniacs, Cobra Kai, iCarly, Dexter's Laboratory, and Bel-Air. The goal is to assess whether investing in reboot-related content aligns with audience interest and sentiment.

Methodology

To get this project done, I:

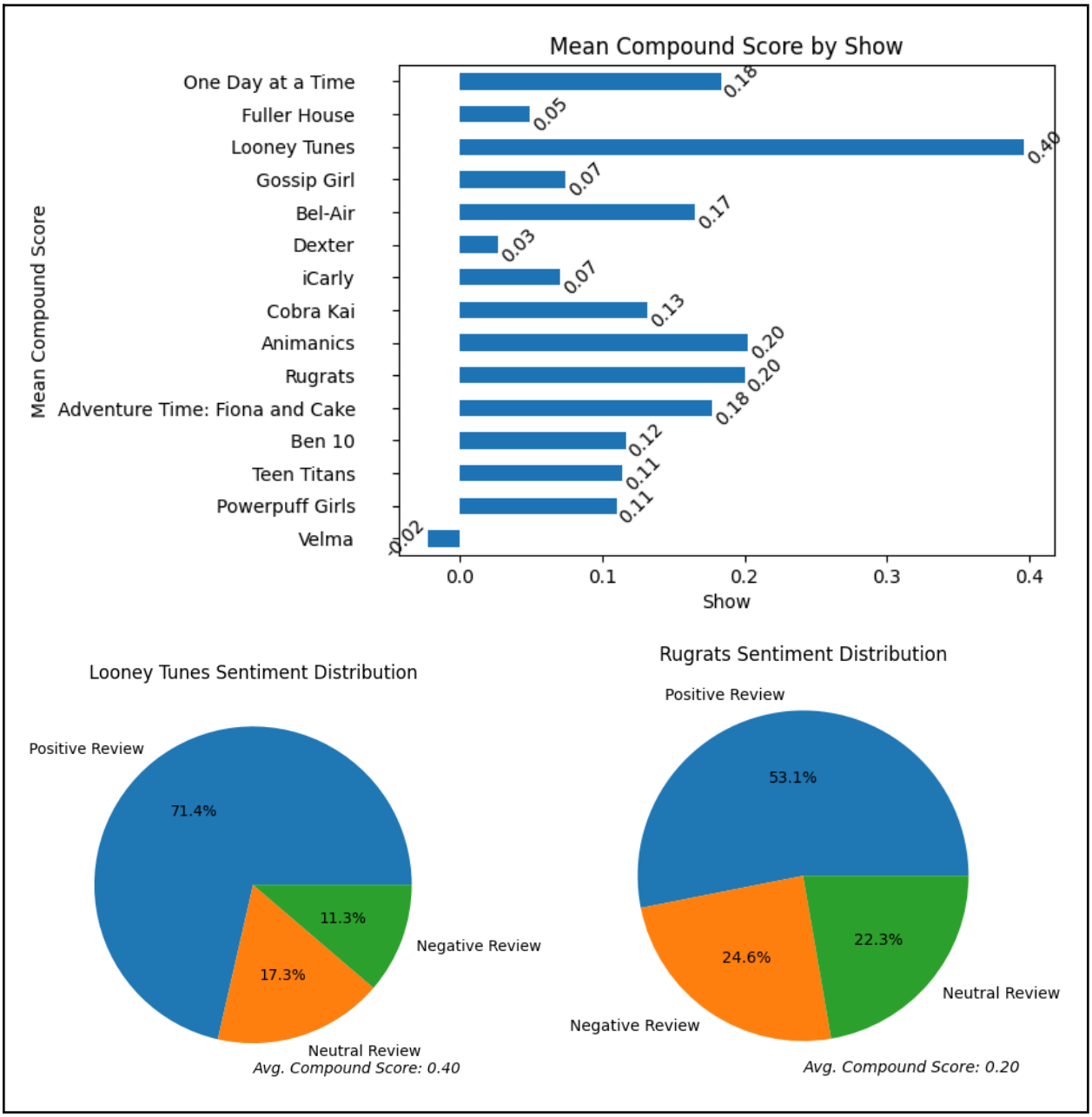
- Scraped comments off YouTube trailers, using the Google API client
- Cleaned and preprocessed text data (lowercasing, stopword removal, lemmatization).
- Conducted sentiment analysis using VADER from NLTK to classify posts as positive, neutral, or negative.
- Visualized sentiment distributions and key trends across each show
- Fitted a Linear Regression model to find the relationship between Sentiment Scores and IMDB ratings

Key Findings

Overall Findings

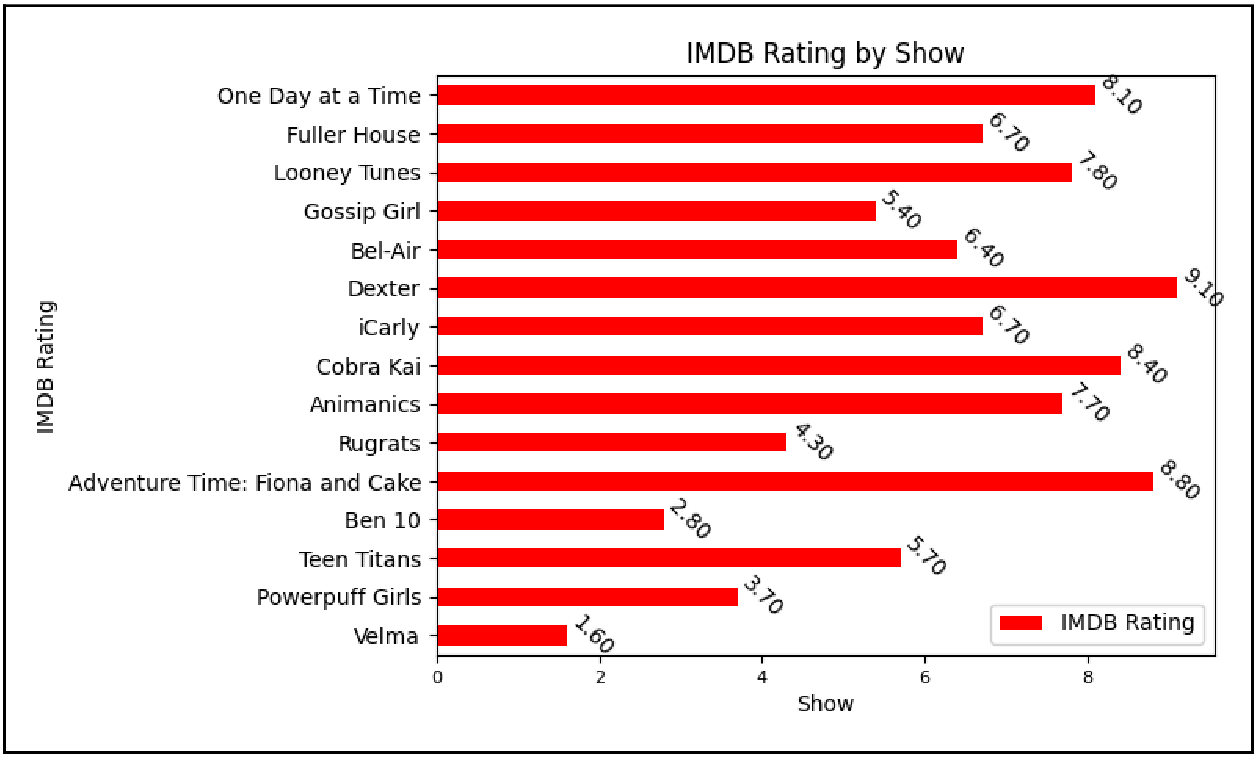
After applying my methodology, I found quite a few interesting things. For one, the vast majority of shows had a good public reception. I had hypothesized the opposite, since reboots are often seen as cheap money grabs more often than not. However, the data shows otherwise.

In VADER, a comment with positive sentiment is one which achieves a compound score of 0.05 or higher. As we can see below, the compound scores for most shows are well over this amount, and looking at the sentiment distribution of a couple of shows, these shows are relatively well received—shown with positive sentiments having the largest slices of the pie.

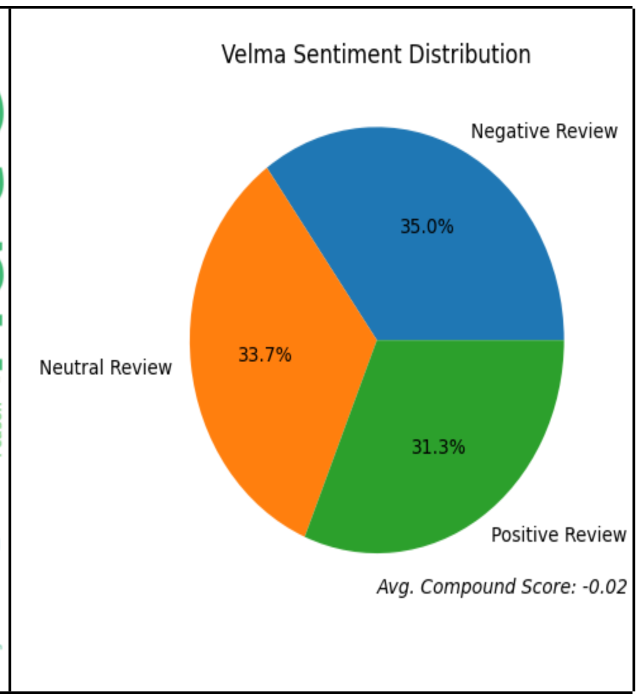


Breaking Down Velma

That said, it is necessary to address the elephant in the room: Velma. No matter how you look at it, the show is doing poorly. It has the lowest compound score and the only one in the negatives, the lowest IMDB rating (which I'll touch on later), and as the word cloud and pie chart below show, it is no doubt hated. However, a deeper dive will show that this has more to do with the quality of the show itself and social-political tensions than overall sentiment surround reboots.


IMDB Rating by Show
IMDB Rating
Show
One Day at a Time
Fuller House
Looney Tunes
Gossip Girl
Bel-Air
Dexter
iCarly
Cobra Kai
Animanics
Rugrats
Adventure Time: Fiona and Cake
Ben 10
Teen Titans
Powerpuff Girls
Velma
8.10
6.70
7.80
5.40
6.40
9.10
6.70
8.40
7.70
4.30
8.80
2.80
5.70
3.70
1.60
0
2
4
6
8
IMDB Rating


Velma Word Cloud
even
one
bad
black
hate
look
dislike
cartoon
now
original
made
garbage
trash
funny
adult


Velma Sentiment Distribution
Negative Review
35.0%
Neutral Review
33.7%
31.3%
Positive Review
Avg. Compound Score: -0.02

Regression

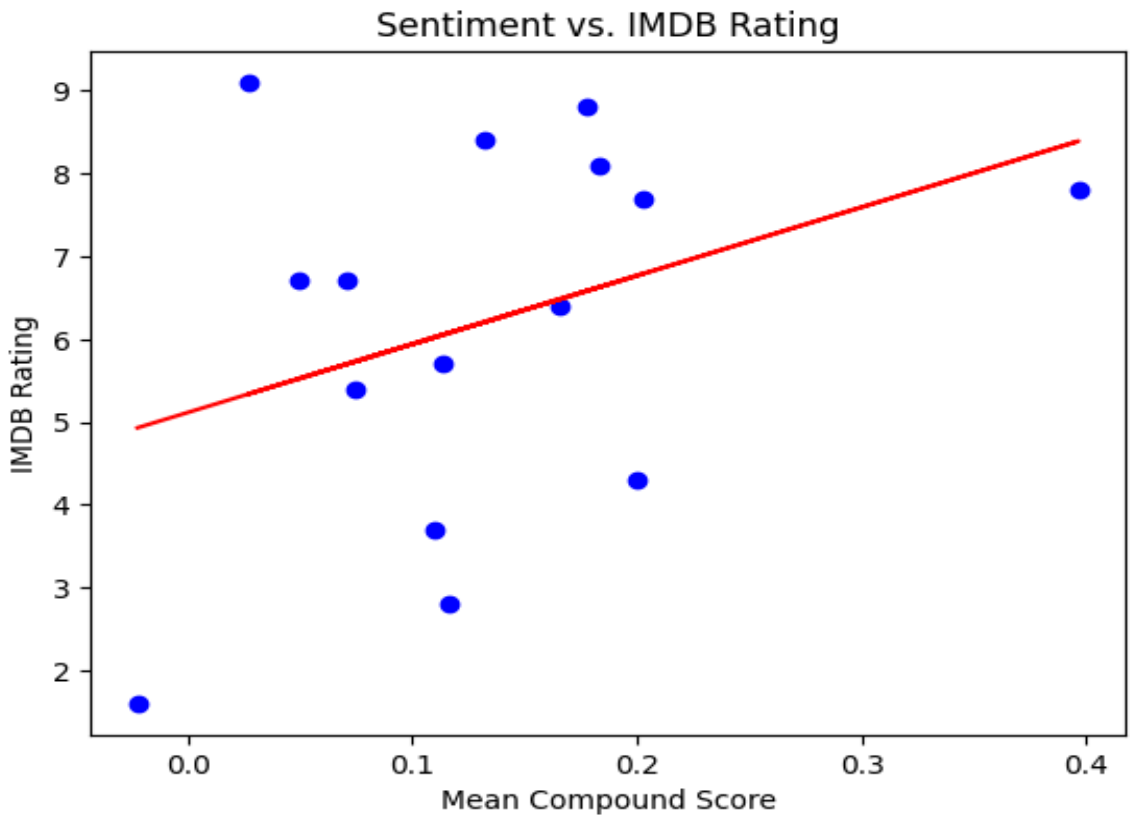
Finally, as a bonus, I decided to take a look at how sentiment matches up with actual TV show ratings. Thus, I fitted a linear regression with the overall sentiment(compound scores) being the independent variable, the IMDB scores being the dependent variable, and the 15 shows I analyzed as observations.

OLS Regression Results

Dep. Variable:	y	R-squared:	0.127
Model:	OLS	Adj. R-squared:	0.060
Method:	Least Squares	F-statistic:	1.899
Date:	Wed, 23 Jul 2025	Prob (F-statistic):	0.191
Time:	13:07:08	Log-Likelihood:	-32.071
No. Observations:	15	AIC:	68.14
Df Residuals:	13	BIC:	69.56
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
const	5.1127	0.981	5.213	0.000	2.994	7.231
x1	8.2658	5.997	1.378	0.191	-4.691	21.222

Omnibus:	0.488	Durbin-Watson:	1.675
Prob(Omnibus):	0.783	Jarque-Bera (JB):	0.550
Skew:	-0.142	Prob(JB):	0.759
Kurtosis:	2.106	Cond. No.	10.7



The results were a bit nuanced. As a quick breakdown:

- The R-squared was 0.127, indicating that sentiment explains roughly 13% of the variation in IMDB ratings.
- The regression slope was positive, showing that shows with more positive sentiment tend to have higher IMDb scores.
- However, the p-value (0.191) implies this relationship is not statistically significant.
- Finally, the intercept of the regression model is approximately 5.11, and the coefficient is around 8.27. This means that if a show has a compound sentiment score of 0, its expected IMDb rating would be about 5.11. If the sentiment score drops to -0.3, the expected rating falls to roughly 2.61. In general, we can estimate a show's rating using the linear equation:

$$y = 5.11 + 8.32*X$$

(where y = IMDB rating, and X = compound sentiment score)

As the R-squared value and p-value indicate, this isn't a highly reliable predictive model. The relationship isn't statistically significant. However, it does give a rough sense of the direction things tend to go.

Or in layman's terms: how people feel about a show in the comment section doesn’t do a great job predicting how well the show will actually be rated. Shocker, I know. Still, there is a general trend: The more positive the sentiment, the higher the show's IMDB score tends to be.

What does this mean?

- **Reboots aren't a dead end:** Remember, most shows analyzed had overall positive sentiment
- **Lean into advertising:** Reboots and live action remakes of movies and shows are a big trend. As the data shows, it would be unwise to ignore them.
- **Avoid controversy traps:** shows like Velma show how sociopolitical misalignment can spark backlash, even before release.
- **Be ready:** So many have come out in the recent past and are coming out in the near future. Be ready for their release, and the company's social and economic revenue could increase quite noticeably.

Issues

Like most real-world projects, this one had limitations:

1. **Platform Bias:** Data was only collected from YouTube, which may not fully reflect broader sentiment across platforms like TikTok, Reddit, or X.
2. **Sampling Scope:** Comments were mostly scraped from trailers only, not full episodes or in-depth reviews, possibly skewing toward pre-release hype or backlash.
3. **Sentiment Model Limitations:** VADER, while effective, struggles to correctly interpret sarcasm, humor, or irony, especially common in online fan communities.

That said, the insights pulled from this experiment were helpful, and do give a good guide on the profitability of reboots, why companies seem to be all too eager to make more, and why pop culture companies can benefit immensely by boarding the hype train.