

# No publicity is bad publicity

On the impact of the sentiment in games' success



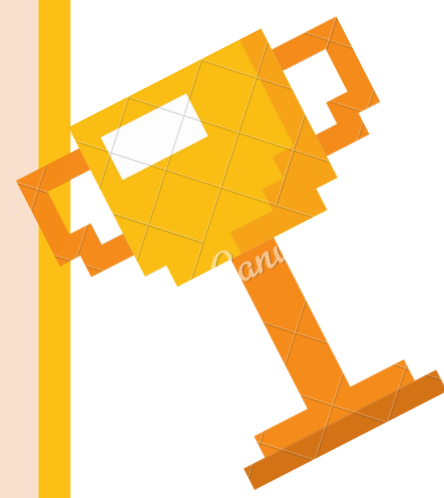
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## PROBLEM

The relationship between gamers and game makers is not a simple one. On social media, we often observe a wave of negative comments and critique, even hate towards the company and developers behind the game. Despite the hate, the companies are not going broke. Sometimes it is the opposite - they note huge profits and their products win prestigious awards.

Is it possible to tell which game will win The Games Award 2022 simply by analyzing the mood on social media? Do the gamers' opinions and success in The Game Awards affect the company's stock quotes? We will try to answer these questions. We propose the following hypothesis:

**The sentiment and the number of posts regarding the given game is in correlation with the results of The Best Game of the Year Award.**



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## DATA

The data was collected from three sources: Twitter, Reddit, and Yahoo Finance. The process of gathering text data meets the following requirements:

- Data split into two periods - before and after The Game Awards: 2022-11-14 - 2022-12-08 and 2022-12-10 - 2022-12-25
- Searching for user activity regarding the topic of: **The Game Awards, The Game of the Year, Elden Ring, A plague tale: requiem, God of War: Ragnarok, Horizon Forbidden West, Stray, Xenoblade Chronicles 3.**

The faulty posts or those from different topics were automatically discarded from the dataset. It was done by applying selected criteria to the data using the Pandas module. The statistics of the final thataset are as follows:

### Twitter

- From over 230k posts, the 45k most popular were selected.
- 5 games to analyze - **Stray** was discarded.
- 35k unique users.
- 27k unique conversations.
- For each post, the comments, retweets, and mentions were collected.



### Reddit

- From over 260k posts, the 35k most popular were selected.
- 24k unique users.
- 5 games to analyze - **Stray** was discarded.
- For each post, the comments were collected.

### Stock quotes

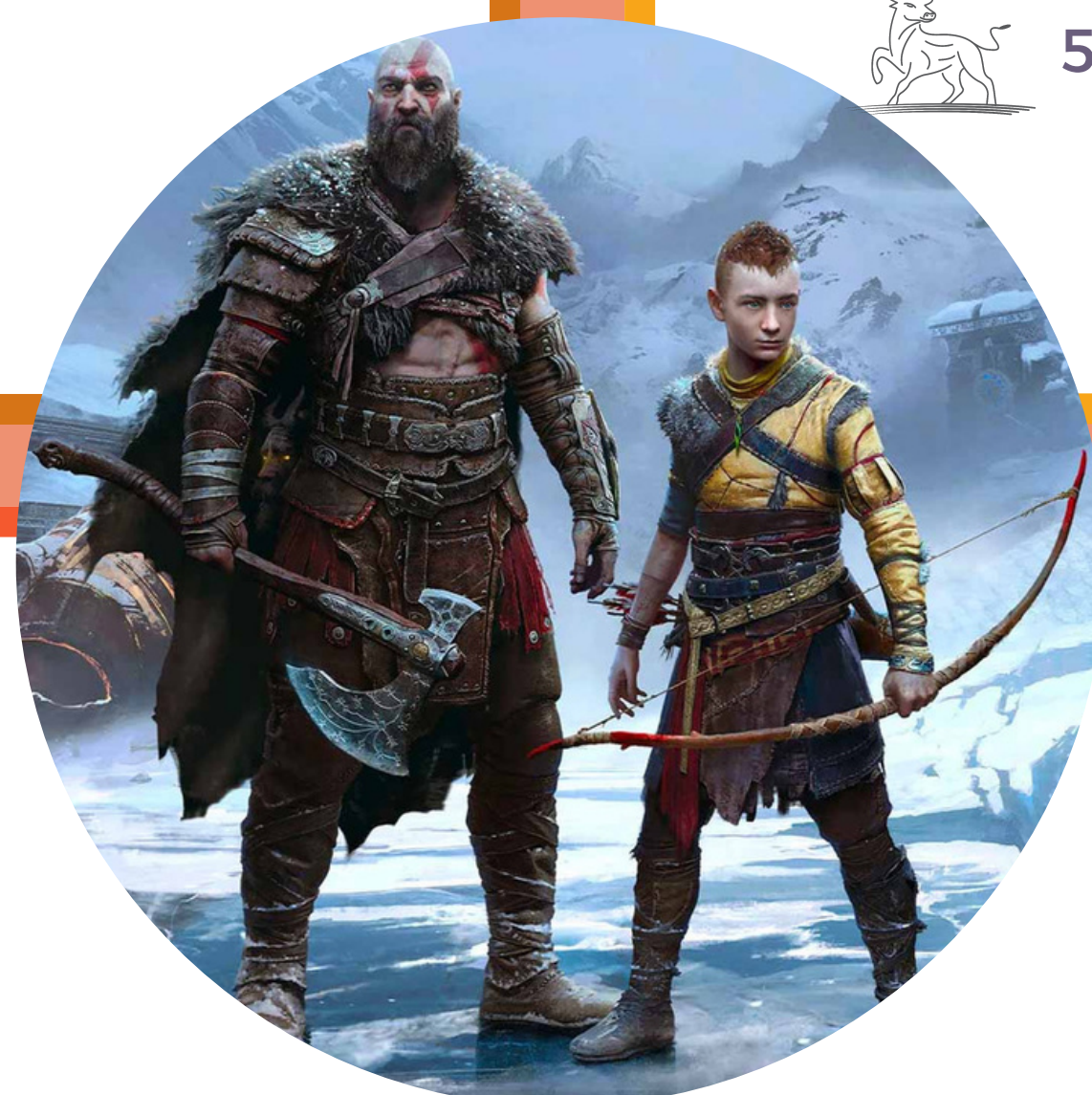
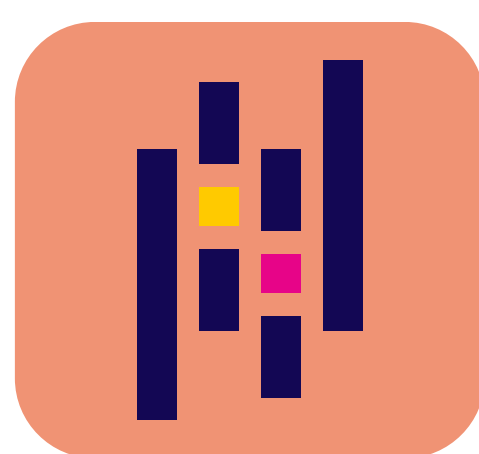
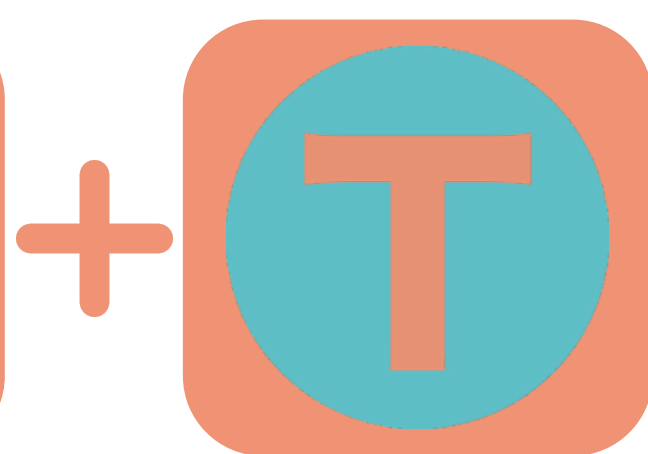
- Data from period: 14.11.2022 - 25.12.2022.
- Daily quotes at the close of the stock exchange.
- 5 companies which released analyzed games.



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## METHOD

The posts and the comments come from two popular platforms: Reddit and Twitter. The data from Twitter was downloaded using the Twint scrapper and from Reddit using PushshiftAPI. Next, the data was processed using the Pandas module, and then the sentiment was analyzed using the RoBERTa model (HuggingFace). The report was created using plotly.

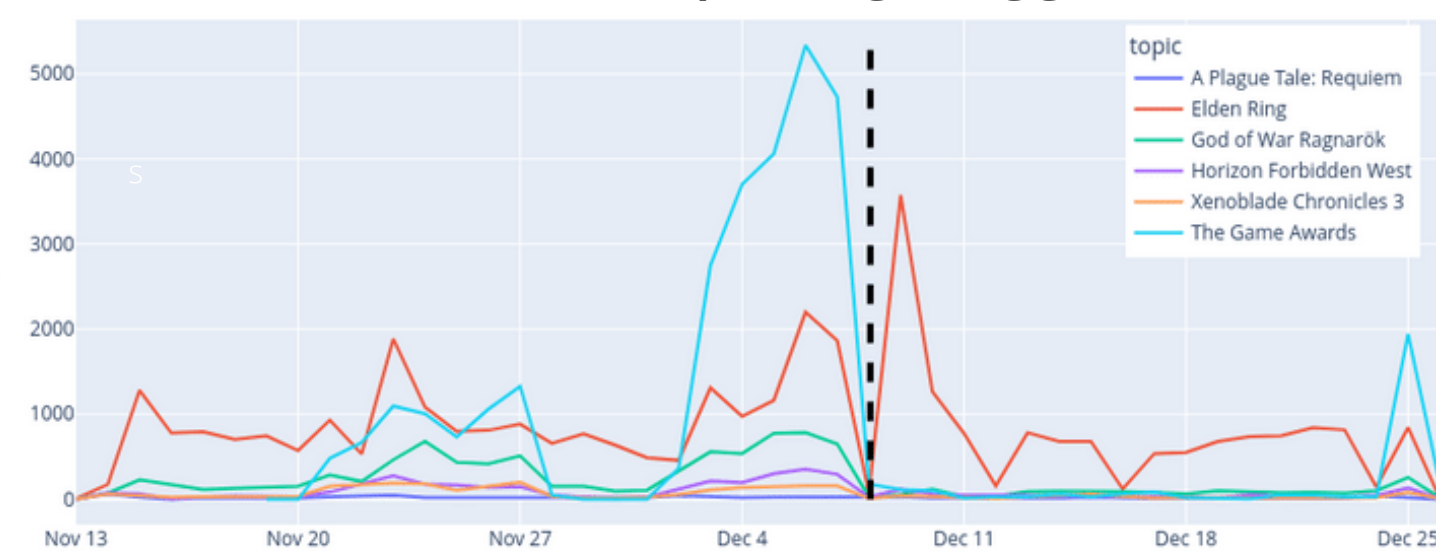


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## RESULTS

Who are they writing about?

[Reddit & Twitter] Number of posts regarding games over time

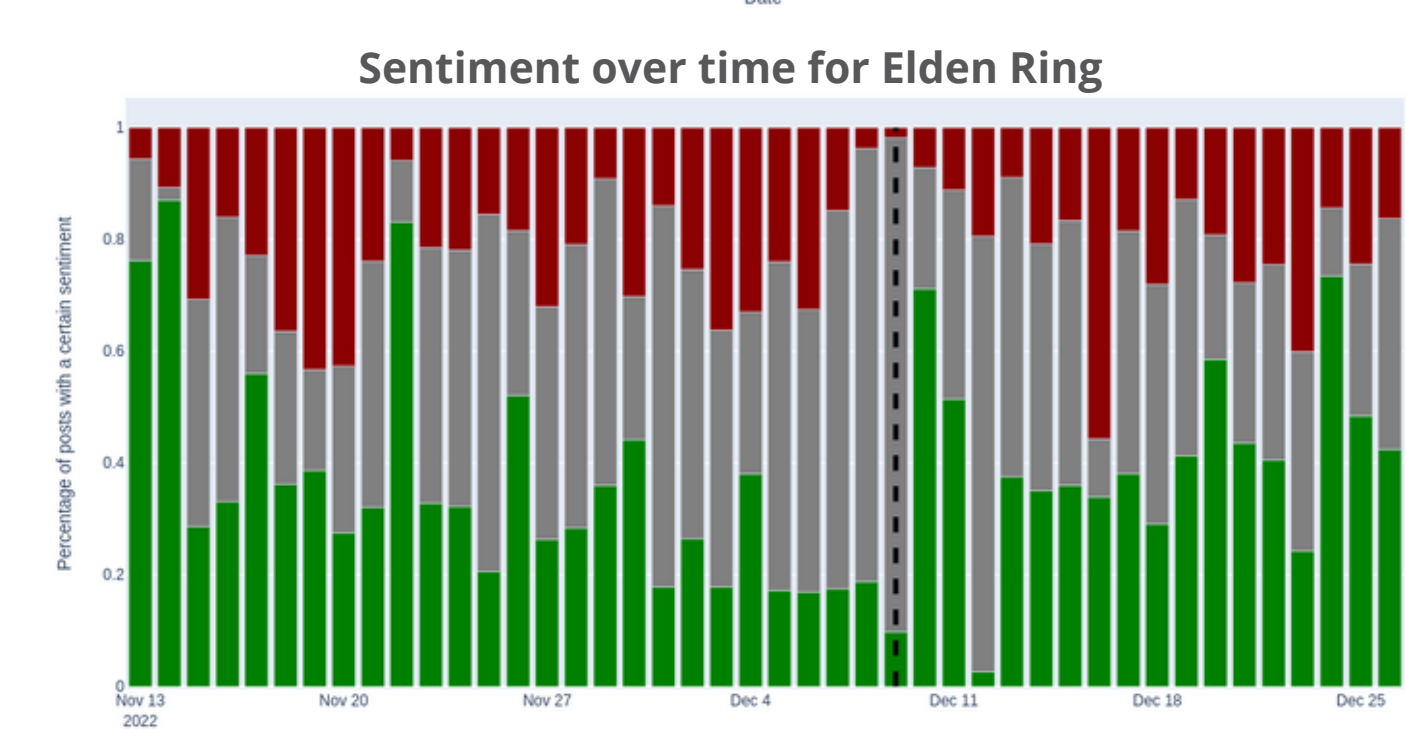
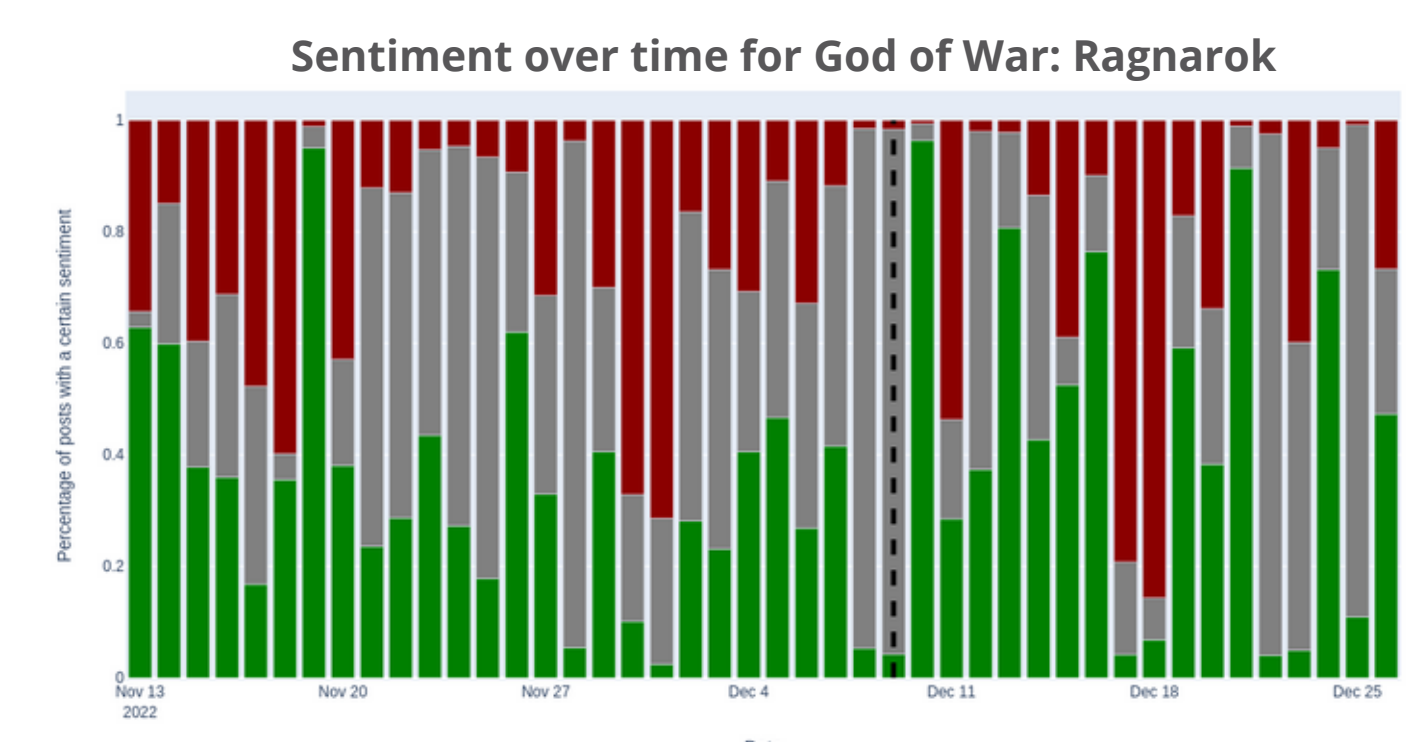


In the period surrounding The Game Awards, we can observe a rapid increase in the popularity of topics regarding nominated games.

During the whole analyzed period, before and after The Game Awards, most posts were on the topic of the two games which were the winners.

### How are they writing?

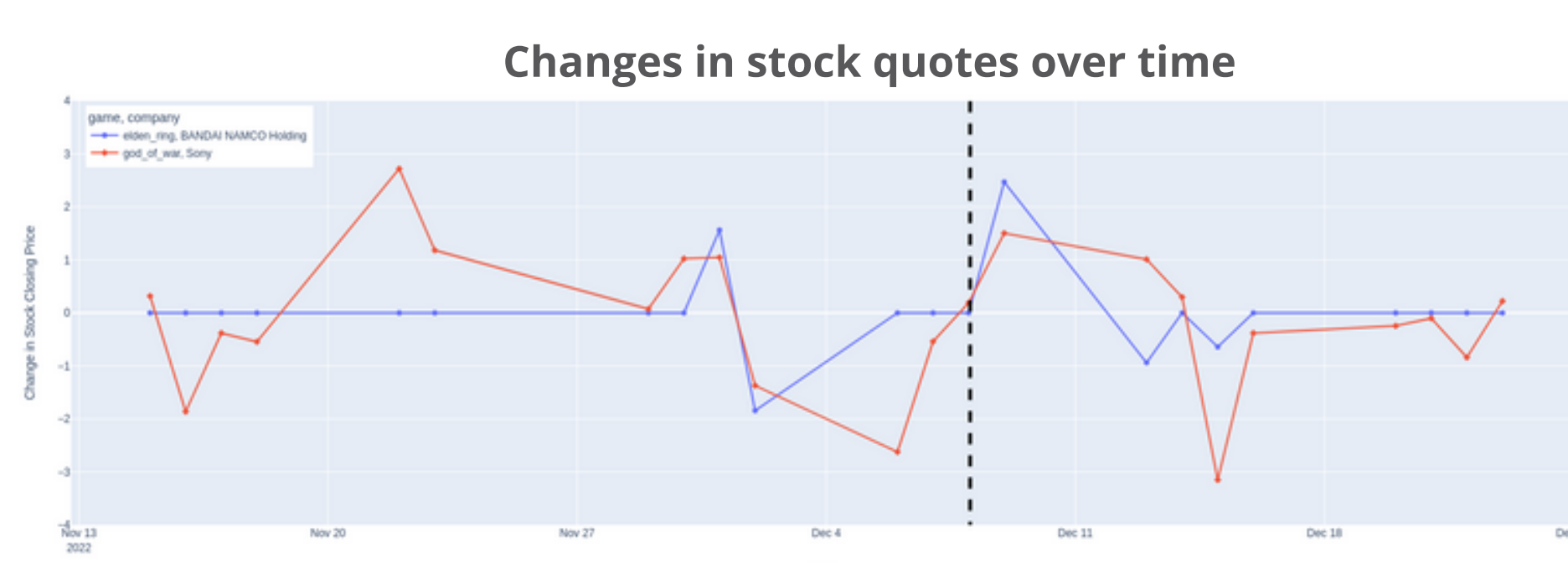
- For God of War, for the peak of the number of posts in the period from the 1st to the 9th of December, we can observe the analogous increase in the percentage of posts with positive sentiment.
- For Elden Ring, we observe a slight increase in the number of posts with negative sentiment, though posts with neutral sentiment are these, which are most the numerous
- After the announcement of the winners for each of the games, there was an increase in the number of posts with positive sentiment



### Can you gain money?

There is an increase in the stock quotes after the announcement of the winners, though the change is not significant.

After only two days after the announcement of the results, the stock quotes dropped again.



### Conclusion

- Basing one's investing strategy on the results of the contest seems to be very risky.
- The results of The Game Awards are in correlation with the number of posts.
- The sentiment is much less correlated with the results than the number of posts. It seems that, in fact, **no publicity is bad publicity!**

