Success in PS4, Failure in Theatre

: Sentimental Analysis on critics of video game-based movies.

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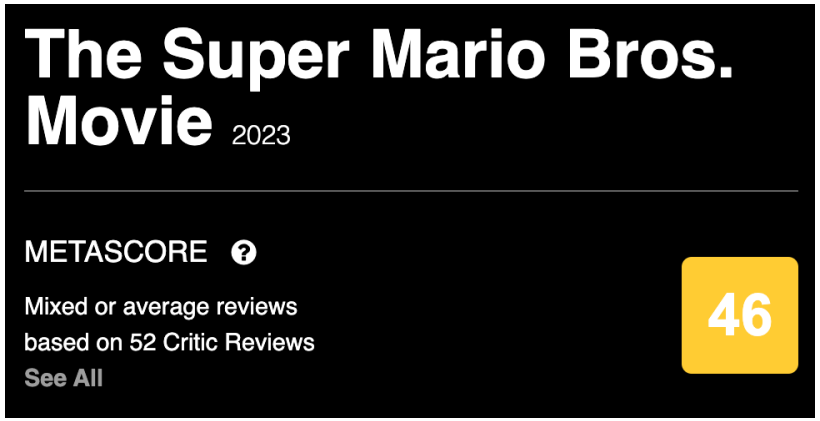
It’s Me, Mario !

https://www.universalpictures.com/movies/the-super-mario-bros-movie

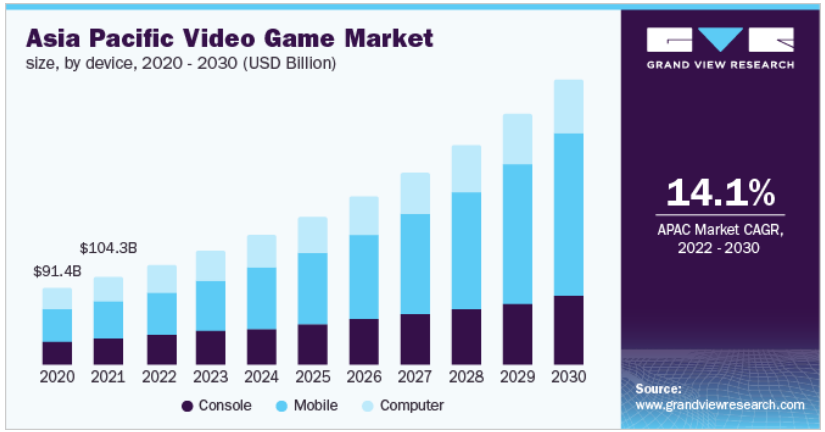
The Super Mario Bros. Movie (2023)

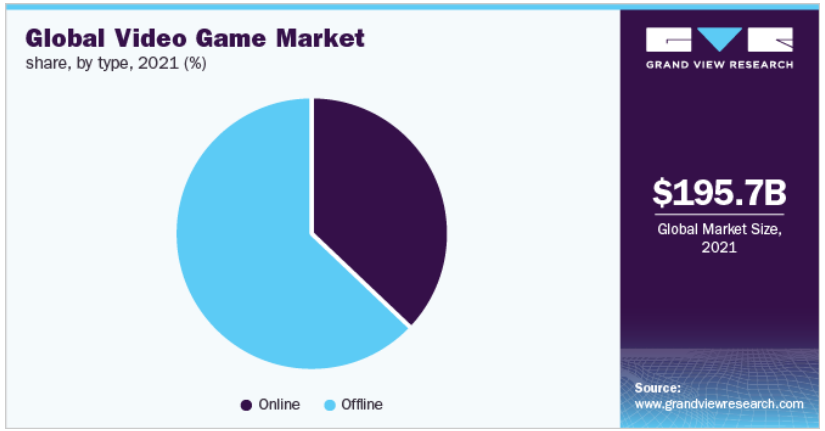
- Based on the most famous video game series, Super Mario series.
- Nintendo & Illumination Entertainment



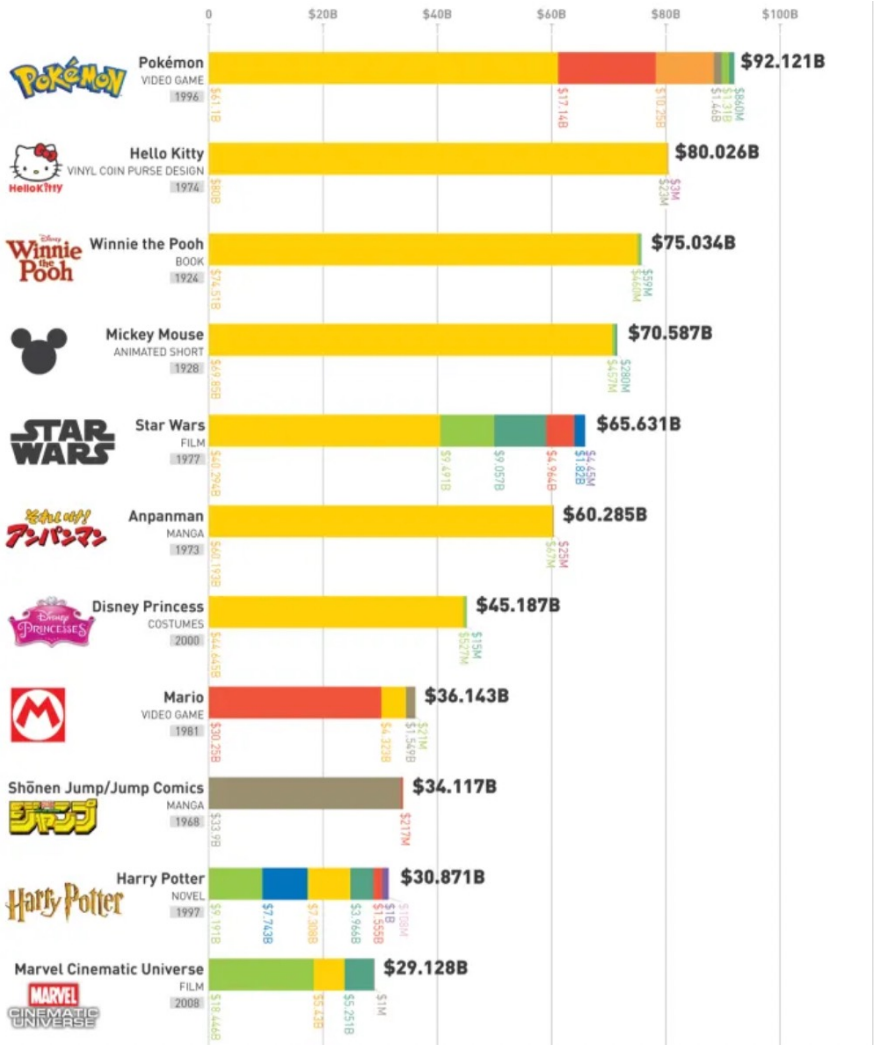
https://www.metacritic.com/movie/the-super-mario-bros-movie

Success of Video Game Industry





https://www.grandviewresearch.com/industry-analysis/video-game-market



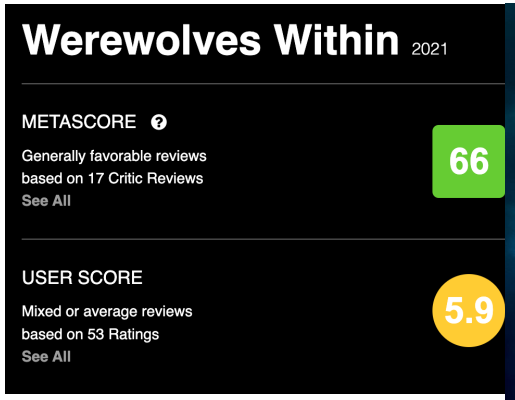
https://www.titlemax.com/discovery-center/money-finance/the-25-highest-grossing-media-franchises-of-all-time/

Failure of Video Game-based Movies

List of video game-based movies in a descending order of its Metascore

Werewolves Within	June 25, 2021	$937,490[115]	86%[116]	66/100[117]	IFC Films	Ubisoft
Mortal Kombat	August 18, 1995	$124,741,822[c]	45%[9]	60/100[10]	New Line Cinema	Midway
Pokémon Detective Pikachu	May 10, 2019	$433,230,304[103]	68%[104]	53/100[105]	Warner Bros. Pictures	Nintendo The Pokémon Company
Prince of Persia: The Sands of Time	May 28, 2010	$336,365,676[69]	37%[70]	50/100[71]	Walt Disney Studios Motion Pictures	Ubisoft
Resident Evil: The Final Chapter	January 27, 2017	$312,257,250[93]	37%[94]	49/100[95]	Sony Pictures Releasing	Capcom
Tomb Raider	March 16, 2018	$274,650,803[96]	52%[97]	48/100[98]	Warner Bros. Pictures	Square Enix
Sonic the Hedgehog	February 14, 2020	$319,715,683[106]	63%[107]	47/100[108]	Paramount Pictures	Sega
Monster Hunter	December 18, 2020	$42,145,959[109]	45%[110]	47/100[111]	Sony Pictures Releasing	Capcom
Sonic the Hedgehog 2	April 8, 2022	$405,421,518[124]	69%[125]	47/100[126]	Paramount Pictures	Sega
Rampage	April 13, 2018	$428,028,233[99]	51%[100]	45/100[101]	Warner Bros. Pictures	Warner Bros. Games
Uncharted	February 18, 2022	$401,748,820[121]	41%[122]	45/100[123]	Sony Pictures Releasing	Sony Interactive Entertainment
Mortal Kombat	April 23, 2021	$83,601,013[112]	54%[113]	44/100[114]	Warner Bros. Pictures	Warner Bros. Games
Resident Evil: Welcome to Raccoon City	November 24, 2021	$38,600,612[118]	31%[119]	44/100[120]	Sony Pictures Releasing	Capcom
Lara Croft: Tomb Raider – The Cradle of Life	July 25, 2003	$156,505,388[23]	24%[24]	43/100[25]	Paramount Pictures	Eidos
Resident Evil: Extinction	September 21, 2007	$148,412,065[47]	25%[48]	41/100[49]	Sony Pictures Releasing	Capcom

https://en.wikipedia.org/wiki/List_of_films_based_on_video_games



https://www.metacritic.com/movie/werewolves-within

Metascore?

General Meaning of Score	Movies, TV & Music	Games
Universal Acclaim	81 - 100	90 - 100
Generally Favorable Reviews	61 - 80	75 - 89
Mixed or Average Reviews	40 - 60	50 - 74
Generally Unfavorable Reviews	20 - 39	20 - 49
Overwhelming Dislike	0 - 19	0 - 19

- https://www.metacritic.com/about-metascores

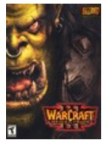
Compare Metascores of movies and and its original games

Super Mario Odyssey
Switch Game, 2017
97
New Evolution of Mario Sandbox-Style Gameplay. Mario embarks on a new journey through unknown worlds, running and jumping through huge 3D worlds in the first sandbox-style Mario game since Super...

Tomb Raider
PS3 Game, 2013
87
An intense and gritty story of the origins of Lara Croft and her ascent from frightened young woman to hardened survivor in Tomb Raider.

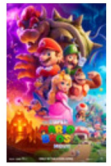
Sonic the Hedgehog 2
X360 Game, 2007
82
[Xbox Live Arcade] With his new Super Spin Dash and "Tails" the Fox, Sonic is back and better than ever in Sonic The Hedgehog 2. Defy gravity in hair-raising loop-de-loops, bounce like a pinball...

Assassin's Creed II
PS3 Game, 2009
91
Assassin's Creed II is the product of over two years of intensive development by the original creative team behind the Assassin's Creed brand. In a vast open world environment, the game invites...



Warcraft III: Reign of Chaos
PC Game, 2002
92
[Metacritic's 2002 PC Game of the Year] It has been nearly fifteen years since the war between the orcs and humans ended. An uneasy peace settled over the land while, for years, the drums of war...

Source: www.metacritic.com



The Super Mario Bros. Movie
Movie, 2023
46
While working underground to fix a water main, Brooklyn plumbers Mario and brother Luigi (Charlie Day) are transported down a mysterious pipe and wander into a magical new world. But when the...

Tomb Raider
Movie, 2018
48
Lara Croft (Alicia Vikander) is the fiercely independent daughter of an eccentric adventurer who vanished when she was scarcely a teen. Now a young woman of 21 without any real focus or purpose,...

Sonic the Hedgehog 2
Movie, 2022
47
After settling in Green Hills, Sonic is eager to prove he has what it takes to be a true hero. His test comes when Dr. Robotnik returns, this time with a new partner, Knuckles, in search for an...

Assassin's Creed
Movie, 2016
36
Through a revolutionary technology that unlocks his genetic memories, Callum Lynch (Michael Fassbender) experiences the adventures of his ancestor, Aguilar, in 15th Century Spain. Callum discovers...

Warcraft
Movie, 2016
32
The peaceful realm of Azeroth stands on the brink of war as its civilization faces a fearsome race of invaders: Orc warriors fleeing their dying home to colonize another. As a portal opens to...

Compare Metascores of movies and and its original games

Uncharted 2: Among Thieves
PS3 Game, 2009
MUST-PLAY **96**

Fortune hunter Nathan Drake returns in Uncharted 2: Among Thieves, a third-person action-adventure/shooter created by award-winning developer Naughty Dog. Down on his luck, Drake is lured back into...

Silent Hill 2
PS2 Game, 2001
89

Players assume the role of James, who receives a cryptic letter from his wife (who has been dead for 3 years) beckoning him to meet her in Silent Hill, a place that holds great meaning for the...

Resident Evil 4
PS2 Game, 2005
MUST-PLAY **96**

In Resident Evil 4 players are reacquainted with Leon S. Kennedy, Raccoon City Police Department's idealistic rookie cop from "Resident Evil 2." It has been six years since the destruction of...

Mortal Kombat 11 Ultimate
PC Game, 2020
91

Continue the epic saga through a new cinematic story that is more than 25 years in the making. Players will take on the role of a variety of past and present characters in a time-bending new...

Need for Speed: Hot Pursuit 2
PS2 Game, 2002
89

Become the "Champion Road Racer" by conquering numerous racing events, all carrying rewards such as: cars, tracks and high performance upgrades. The game challenges the driver to dodge traffic,...

Uncharted
Movie, 2022
45

Street-smart Nathan Drake (Tom Holland) is recruited by seasoned treasure hunter Victor “Sully” Sullivan (Mark Wahlberg) to recover a fortune amassed by Ferdinand Magellan and lost 500 years ago by...

Silent Hill
Movie, 2006
31

The eerie and deserted town of Silent Hill draws a young mother desperate to find a cure for her only child's illness. Unable to accept the doctor's diagnosis that her daughter should be...

Resident Evil: Welcome to Raccoon City
Movie, 2021
44

In Resident Evil: Welcome to Raccoon City, once the booming home of pharmaceutical giant Umbrella Corporation, Raccoon City is now a dying Midwestern town. The company’s exodus left the city a...

Mortal Kombat
Movie, 2021
44

In Mortal Kombat, MMA fighter Cole Young, accustomed to taking a beating for money, is unaware of his heritage—or why Outworld's Emperor Shang Tsung has sent his best warrior, Sub-Zero, an...

Need For Speed
Movie, 2014
39

Framed for a crime he didn't commit, muscle car mechanic and street racer Tobey Marshall (Aaron Paul) gets out of prison determined to get revenge on the man responsible for his false conviction.

Source: www.metacritic.com

Gathering Data

Metascore

46

POSITIVE: 16

MIXED: 23

NEGATIVE: 13

Critic Reviews

90 WE GOT THIS COVERED

Erielle Sudario Apr 4, 2023

Nintendo knows what's great about the 'Super Mario Bros.' games, and perfectly brings them to life on the big screen. **Read full review**

75 CONSEQUENCE

Liz Shannon Miller Apr 4, 2023

For any parents reading this — it might not be the best film of the year, but you're going to be able to watch The Super Mario Bros. Movie more than once without losing your dang mind. **Read full review**

67 Entertainment.com

Christian Holub Apr 4, 2023

It's all quite fun, with a good sense of humor and a consistent computer-animated aesthetic — plus, at 90 minutes including credits, it's short, sweet, and over

User Score

Write a Review

8.7

POSITIVE: 974

MIXED: 80

NEGATIVE: 63

User Reviews

10 **PietStok**

Apr 5, 2023

From the graphical style, the characters (of course), the voices, the music/sounds, the plot, etc. to the easter eggs (which made me tear up)... EVERYTHING breathes Nintendo and it's amazing for real Nintendo & Mario fans. A MUST SEE!

50 13

10 **Ewas228**

Apr 8, 2023

One of the best movies in past few years. CGI pretty solid, plot from start till the titles very interesting, especially final phase where one battle phase starts during another battle part, and every combat moment have a lot of action, I just love it. All soundtrack inspired from the games… **Expand**

2 1

10 **BolinhoDoce**

Apr 21, 2023

Source: www.metacritic.com

Gathering Data

```r
library(rvest)
library(httr)
library(stringr)
library(tidytext)
library(textdata)
```

```r
movies <- c("the-super-mario-bros-movie", "warcraft", "sonic-the-hedgehog", "tomb-raider", "assassins-creed", "uncharted",
            "resident-evil-welcome-to-raccoon-city", "mortal-kombat-2021", "rampage", "need-for-speed", "silent-hill", "hitman-agent-47")
```

- url of each movie: *https://www.metacritic.com/movie/[NAME_OF_MOVIE]/critic-reviews*
- [NAME_OF_MOVIE] can be replaced as items in *movies* vector through an iteration.

- Each review has a class named “no_hover”. We will gather reviews based on this classname.

Gathering Data

```r
reviews <- c()

for (movie in movies) {
  url <- paste0("https://www.metacritic.com/movie/", movie, "/critic-reviews")
  data <- read_html(url)
  review <- data |> html_nodes("a.no_hover") |> html_text() |> str_trim()
  reviews <- append(reviews, review)
}
```

Gathering Data

```
num <- seq(from = 1, to = length(reviews))
df <- data_frame(line = num, text = reviews)
reviews_df <- df |> unnest_tokens(word, text) |> filter(!word %in% stop_words$word)
```

- Create dataframe called df with reviews as text
- Unnest the text, separating word by word
- And filter the stop_word

```
> reviews_df
# A tibble: 7,237 × 2
    line word
   <int> <chr>
 1     1 nintendo
 2     1 super
 3     1 mario
 4     1 bros
 5     1 games
 6     1 perfectly
 7     1 brings
 8     1 life
 9     1 screen
10     2 super
# … with 7,227 more rows
# ℹ Use `print(n = ...)` to see more rows
```

- PROBLEM!
  - word in movie names, such as Tomb, Rampage, Super,… are also involved in sentimental analysis
- We need to filter these movie names as well

Gathering Data

```r
title_words <- str_split(movies, "-") |> unlist()

reviews_df <- reviews_df |> filter(!word %in% title_vector)
```

- Create a vector called title_words, its elements are words in titles of movies.
- Then we filter the review_df dataframe by word elements of title_words vector.

```
> title_words
 [1] "the"       "super"     "mario"     "bros"      "movie"     "warcraft"  "sonic"     "the"       "hedgehog"  "tomb"      "raider"    "assassins" "creed"
[14] "uncharted" "resident"  "evil"      "welcome"   "to"        "raccoon"   "city"      "mortal"    "kombat"    "2021"      "rampage"   "need"      "for"
[27] "speed"     "silent"    "hill"      "hitman"    "agent"     "47"
```

```
> reviews_df
# A tibble: 6,665 × 2
    line word
   <int> <chr>
 1     1 nintendo
 2     1 games
 3     1 perfectly
 4     1 brings
 5     1 life
 6     1 screen
 7     2 captures
 8     2 spirit
 9     2 games
10     2 deep
# … with 6,655 more rows
# ℹ Use `print(n = ...)` to see more rows
```

- We can see title words are filtered.

Sentimental Analysis

```r
bing <- get_sentiments("bing")

reviews_df <- reviews_df |> inner_join(bing) |> count(word, sentiment, sort = TRUE)
```

- Use bing lexicon, as this project want to figure out which negative words are used, not their degree.

```
> reviews_df
# A tibble: 686 × 3
   word  sentiment     n
   <chr> <chr>     <int>
 1 fun   positive     33
 2 plot  negative     23
 3 bad   negative     18
 4 fans  positive     14
 5 lack  negative     12
 6 top   positive     12
 7 dull  negative     11
 8 fast  positive     11
 9 hard  negative     11
10 humor positive     10
# … with 676 more rows
# ℹ Use `print(n = ...)` to see more rows
```

```
> reviews_df |> count(sentiment=="negative")
# A tibble: 2 × 2
  `sentiment == "negative"`     n
  <lgl>                     <int>
1 FALSE                       282
2 TRUE                        404
```

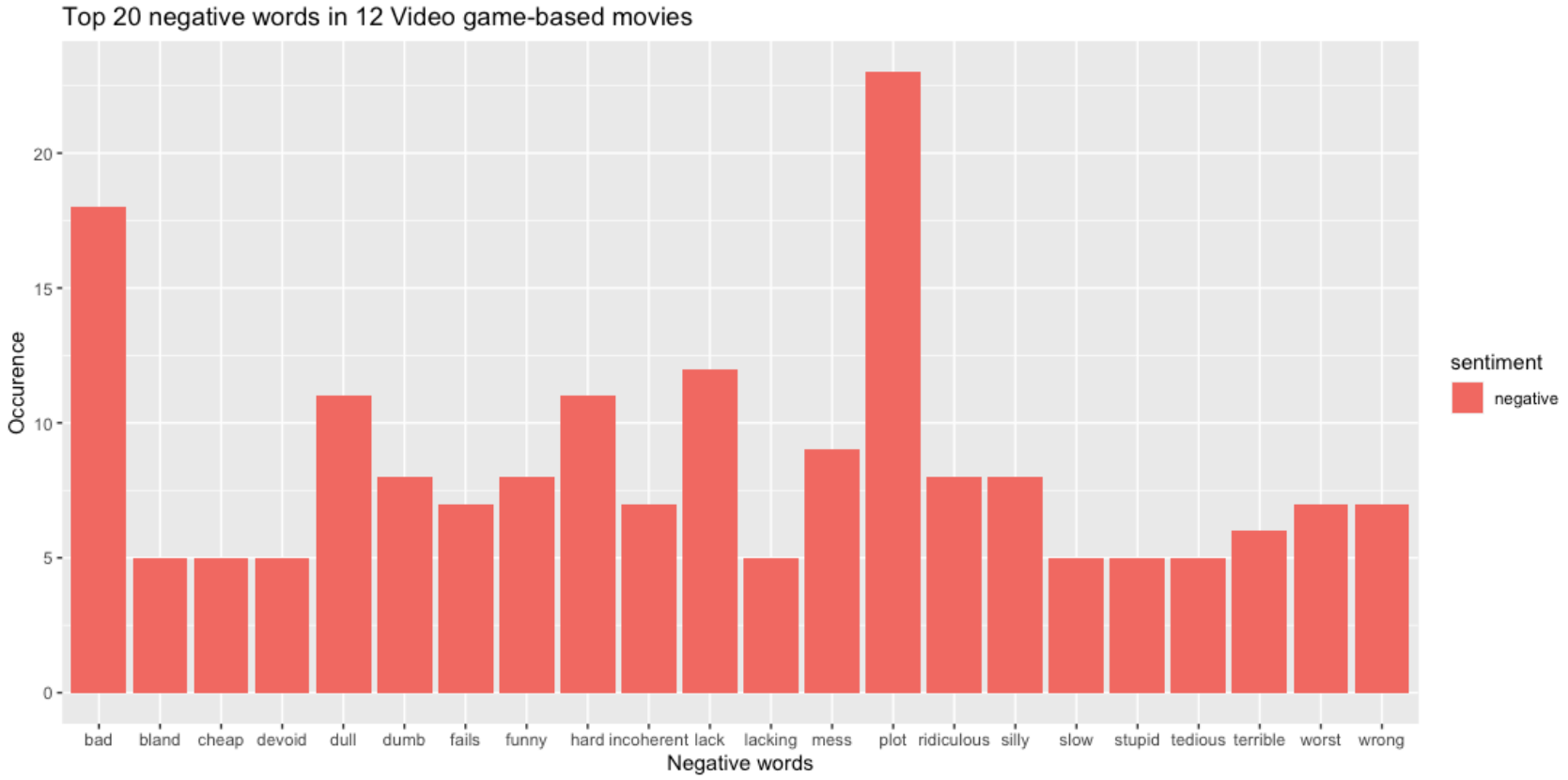
We can see around 60% of words are negative. We filter only negative words.

Sentimental Analysis

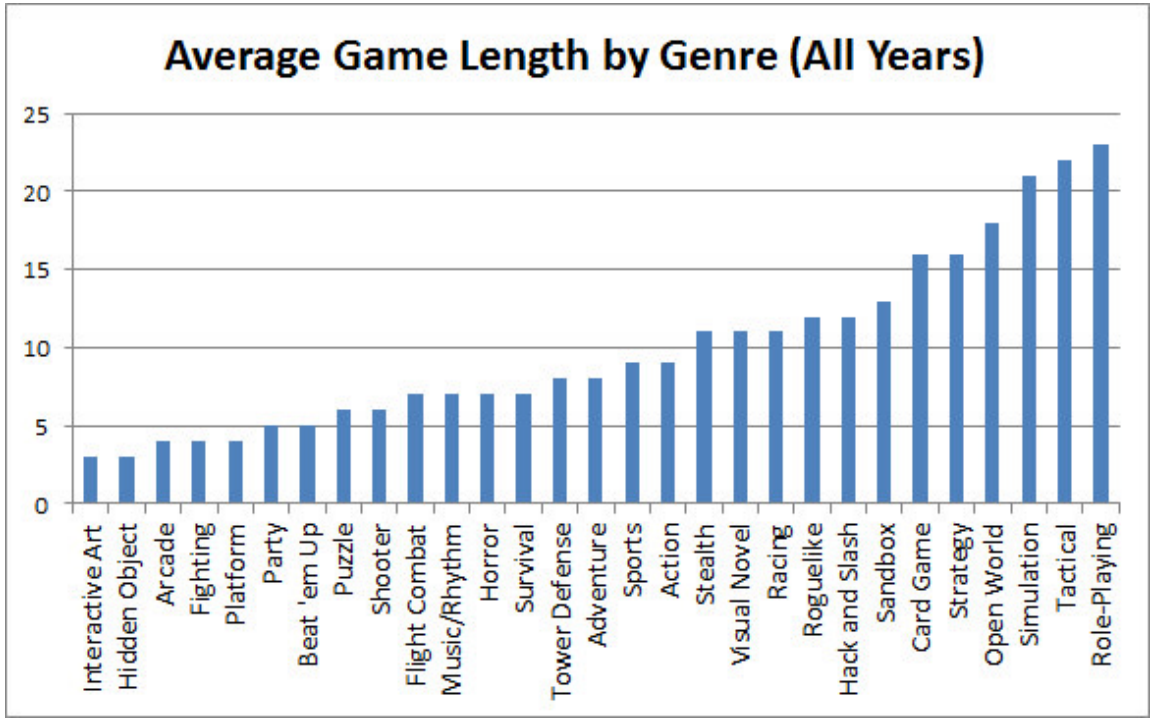
```
> negative_df <- reviews_df |> filter(sentiment=="negative")
> negative_df
# A tibble: 404 x 3
   word       sentiment     n
   <chr>      <chr>     <int>
 1 plot       negative     23
 2 bad        negative     18
 3 lack       negative     12
 4 dull       negative     11
 5 hard       negative     11
 6 mess       negative      9
 7 dumb       negative      8
 8 funny      negative      8
 9 ridiculous negative      8
10 silly      negative      8
# … with 394 more rows
# ℹ Use `print(n = ...)` to see more rows
```

Sentimental Analysis

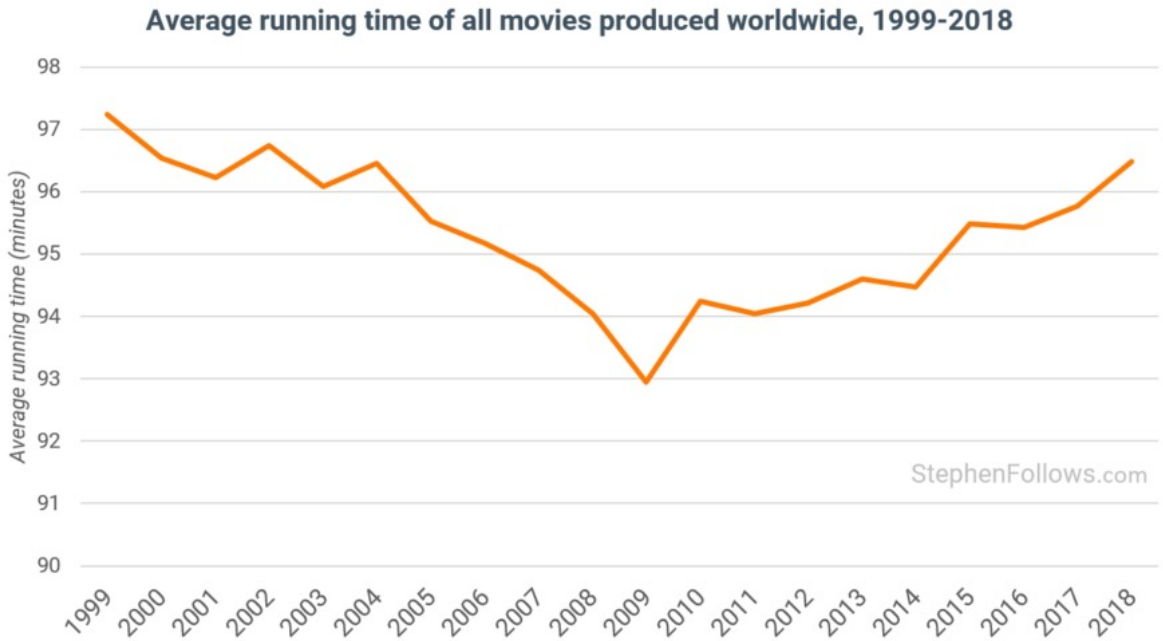
```
negative_df |> group_by(sentiment) |> top_n(20, n) |> ggplot(aes(x=word, y=n, fill=sentiment))
+ geom_col() + labs(title="Top 20 negative words in 12 Video game-based movies", x="Negative words", y="Occurence")
```



Running Time of Movies V.S Playing Time of Games



https://www.theringer.com/2016/8/25/16038806/video-game-length-playtimes-f7b8e38f949f



https://stephenfollows.com/are-movies-getting-longer/

Limitations

- Dataset might not big enough for sentimental analysis.
- Performing sentimental analysis word-by-word might overlook the whole context of the review.
- Critics criticize video game-based movies as a normal movie.

Thank You