

# Final Project in CS 101

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```
library(rvest)
library(dplyr)

##
## Attaching package: 'dplyr'
## The following objects are masked from 'package:stats':
##
##   filter, lag
## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union
library(kableExtra)

##
## Attaching package: 'kableExtra'
## The following object is masked from 'package:dplyr':
##
##   group_rows
scrape_reviews <- function(url) {
  page <- read_html(url)

  user <- page %>% html_nodes(".display-name-link") %>% html_text()
  date <- page %>% html_nodes(".review-date") %>% html_text()
  rating <- page %>% html_nodes(".rating-other-user-rating") %>% html_text()
  comment_title <- page %>% html_nodes(".title") %>% html_text()
  comment <- page %>% html_nodes(".text.show-more__control") %>% html_text()

  reviews <- data.frame(User = user, Date = date, Rating = rating, Title = comment_title, Comment = comment)
  return(reviews)
}

scrape_multiple_pages <- function(base_url, reviews_per_page = 10, total_reviews_target = 300) {
  all_reviews <- data.frame()
  num_pages <- ceiling(total_reviews_target / reviews_per_page)

  for (page_num in 1:num_pages) {
    url <- paste0(base_url, "&start=", (page_num - 1) * reviews_per_page)
    reviews <- scrape_reviews(url)
    all_reviews <- bind_rows(all_reviews, reviews)
  }
}
```

```

    if (nrow(all_reviews) >= total_reviews_target) {
      break
    }
  }

  return(all_reviews)
}

base_url <- "https://www.imdb.com/title/tt2380307/reviews?ref_=tt_urv"

all_reviews <- scrape_multiple_pages(base_url, reviews_per_page = 10, total_reviews_target = 300)

write.csv(all_reviews, "imdb_reviews.csv", row.names = FALSE)

knitr::kable(all_reviews, caption = "Reviews on Coco Movie", ouput_format = "pdf_document") %>%
  kable_styling(font_size = 7)

library(tidytext)
library(dplyr)
library(ggplot2)
library(wordcloud)

## Loading required package: RColorBrewer
all_reviews <- read.csv("imdb_reviews.csv")

all_reviews_sentiments <- all_reviews %>%
  mutate(Comment = as.character(Comment)) %>%
  unnest_tokens(word, Comment) %>%
  inner_join(get_sentiments("bing")) %>%
  count(User, Sentiment = sentiment) %>%
  arrange(desc(n))

## Joining with `by = join_by(word)`
sentiment_plot <- all_reviews_sentiments %>%
  ggplot(aes(x = Sentiment, y = n, fill = Sentiment)) +
  geom_bar(stat = "identity") +
  labs(title = "Sentiment Distribution in Coco Movie Reviews", x = "Sentiment", y = "Count") +
  theme_minimal()

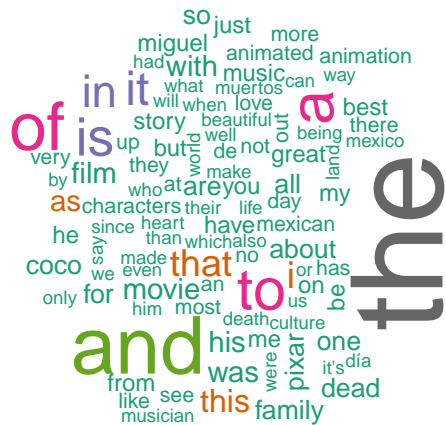
word_frequency <- all_reviews %>%
  mutate(Comment = as.character(Comment)) %>%
  unnest_tokens(word, Comment) %>%
  count(word) %>%
  arrange(desc(n)) %>%
  head(100)

word_cloud_plot <- wordcloud(words = word_frequency$word, freq = word_frequency$n, max.words = 100, col =

```

Table 1: Reviews on Coco Movie

User	Date	Rating	Title	Comment
neil-476	1 May 2018	10/10	Succeeds on all levels	Music is banned in Miguel
planktonrules	31 October 2018	10/10	What's not to like?!	I am very glad I saw "Coco"
jp_91	28 November 2021	10/10	The magic of Mexico!	"Coco" is the best animated movie
jon-stokes21-539-17875	1 December 2017	10/10	Shocked!	I knew absolutely nothing about Mexico
h-42927-48851	18 July 2020	10/10	Coco is the number one Pixar cartoon I've seen so far	There are no shortcomings
Tweekums	28 December 2019	10/10	Another great film from Pixar	This Pixar animation is superb
pramsalim	2 December 2017	10/10	I cried twice watching this.	I have always been a fan of Pixar
classiconcall	13 April 2018	10/10	"Music's the only thing that makes me happy."	I'm not an animated movie fan
Calicodreamin	4 September 2019	10/10	Absolutely lovely	Everything about this movie is perfect
fjuuerta-2	28 October 2017	10/10	Stunning, beautiful, colorful, powerful, sad, happy. A joy of a ride.	I may be biased, since the director is Mexican
Jared_Andrews	10 January 2018	8/10	A Charming Depiction of a Beautiful Spanish-Language Tradition	Coco tells the story of my grandfather
namashi_1	18 February 2018	9/10	A Pure Delight!	Pixar has done it AGAIN!
Vuraxis	3 May 2018	9/10	Pixar has created a masterpiece of cinema	I'm no critic, but Coco is a masterpiece
morrison-dylan-fan	28 August 2018	10/10	Celebrating the Day of the Dead.	With a friend's daughter
Charliedog2015	15 April 2018	10/10	Heartbreakingly beautiful. Surpasses Up and Inside Out	Coco is about Dias de los Muertos
TheLittleSongbird	22 January 2018	10/10	It is absolutely a celebration of a lifetime	Have always loved Pixar
p-35646	22 April 2020	10/10	love it	Like the culture of the day
mryohual	27 October 2017	10/10	Gracias Pixar	Im Mexican and all i can say is gracias
mjp0117-26-143834	7 October 2018	10/10	The most beautiful movie.	I've been trying to get my hands on this for years
Xstal	27 October 2020	9/10	Riotous Rocking Resurrection & Insurrection...	An absolutely spectacular movie
bradinhanson	9 May 2018	9/10	Why I believe it deserves a 10	Pixar has come a long way
ethanbresnett	15 June 2021	8/10	It really is as good as they say!	Coco is a very special Pixar movie
andreachaparra	8 May 2018	10/10	Love it	As a Mexican born child
inxsfett	28 October 2017	9/10	"An Respectul Tribute to Mexican Culture and his People"	All my family waiting thru the years
ilias-zournatzis	19 February 2018	10/10	Overwhelmed!	I'm a 24 year old student
neil-476	1 May 2018	10/10	Succeeds on all levels	Music is banned in Miguel
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```
ggsave("sentiment_distribution.png", sentiment_plot, width = 8, height = 6)
ggsave("word_cloud.png", word_cloud_plot, width = 8, height = 6)
```

```
sentiment_description <- "The bar plot illustrates the distribution of sentiments across the Coco movie  
word_cloud_description <- "The word cloud represents the most frequent words found in the comments of the
```

```
descriptions <- c(sentiment_description, word_cloud_description)
writeLines(descriptions, "visualization_descriptions.txt")
```

“The word cloud represents prominent themes and keywords related to the movie”Coco”.It showcases prevalent words like ‘musician,’ ‘family,’ ‘Mexico,’animated,’ and ‘characters,’ offering a visual snapshot of essential elements associated with the film.”