Untitled

2024-12-16

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see http://rmarkdown.rstudio.com.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
library(lexicon)
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ------------------------ tidyverse 2.0.0 --
## v dplyr     1.1.4     v readr     2.1.5
## v forcats   1.0.0     v stringr   1.5.1
## v ggplot2   3.5.1     v tibble    3.2.1
## v lubridate 1.9.3     v tidyr     1.3.1
## v purrr     1.0.2
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
library(topicmodels)
library(tidytext)
library(factoextra)
```

```
## Welcome! Want to learn more? See two factoextra-related books at https://goo.gl/ve3WBa
```

```
library(dplyr)
library(ggplot2)
library(wordcloud)
```

```
## Loading required package: RColorBrewer
```

```
library(RColorBrewer)
movies <- read.csv("movie_plots.csv")
movies <- movies %>%
mutate(Genre = case_when(
str_detect(Plot, "(?i)science|space|experiment|future|alien|
robot|technology|planet|human|new world|earth") ~ "Sci-Fi",
str_detect(Plot, "(?i)love|romance|relationship|affair|
1
wedding|couple|meets|girl") ~ "Romance",
str_detect(Plot, "(?i)war|battle|army|soldier|conflict|
military|enemy|tank|battlefield|dead") ~ "War",
str_detect(Plot, "(?i)ghost|haunt|horror|fear|terror|
scary|supernatural|creepy") ~ "Horror",
str_detect(Plot, "(?i)crime|detective|murder|investigate|
```

```
thriller|mafia|heist|mystery") ~ "Crime",
str_detect(Plot, "(?i)action|fight|fighting|adventure|hero|explosion|
battle|rescue") ~ "Action",
str_detect(Plot, "(?i)comedy|funny|humor|laugh|joke|
satire|parody") ~ "Comedy",
str_detect(Plot, "(?i)history|historical|biography|true story|
period drama|century|ancient") ~ "History",
str_detect(Plot, "(?i)fantasy|magic|myth|legend|superhero|
kingdom|evil") ~ "Fantasy",
str_detect(Plot, "(?i)western|cowboy|wild west|sheriff|ranch|
town|outlaw") ~ "Western",
str_detect(Plot, "(?i)documentary|docu|true events|reality|
biopic") ~ "Documentary",
str_detect(Plot, "(?i)sport|game|team|match|championship|
wrestling") ~ "Sport",
str_detect(Plot, "(?i)home|people|brother|daughter|brothers|
friend|wife|son|father|mother") ~ "Family",
TRUE ~ "Other"
))
genre_frequency <- movies %>%
count(Genre, name = "Frequency")
plot_words <- movies %>%
unnest_tokens(word, Plot) %>%
anti_join(get_stopwords()) %>%
count(Genre, word, sort = TRUE)
```

```
## Joining with `by = join_by(word)`
```

```
nested_data <- plot_words %>%
group_by(Genre) %>%
summarize(
Words = paste(unique(word), collapse = ", ")
) %>%
left_join(genre_frequency, by = "Genre")
view(nested_data)

dtm <- plot_words %>%
cast_dtm(Genre, word, n)
dtm
```

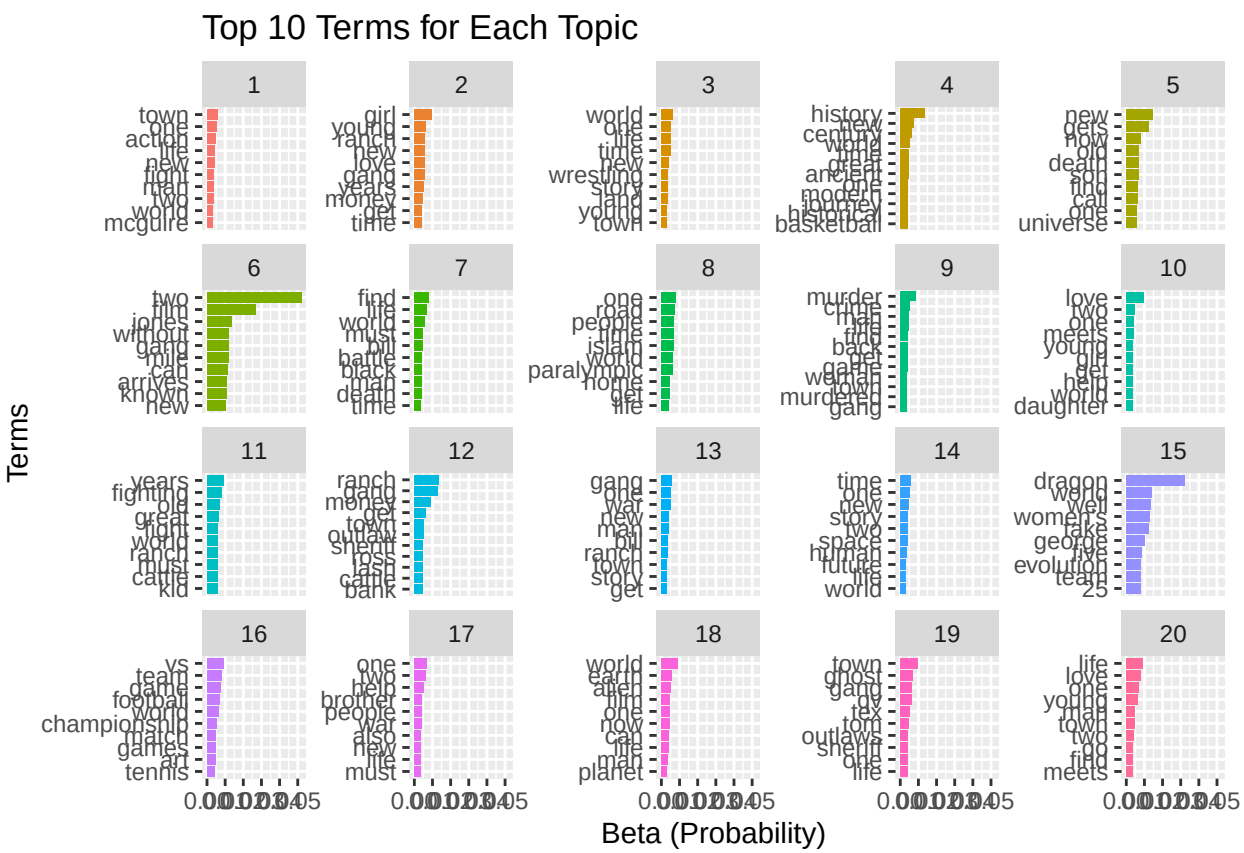
```
## <<DocumentTermMatrix (documents: 14, terms: 14842)>>
## Non-/sparse entries: 30812/176976
## Sparsity           : 85%
## Maximal term length: 17
## Weighting          : term frequency (tf)
```

```
k <- 20
lda_model <- LDA(dtm, k = k, control = list(seed = 999))

topics <- tidy(lda_model, matrix = "beta")

top_terms <- topics %>%
group_by(topic) %>%
slice_max(beta, n = 10) %>%
ungroup() %>%
```

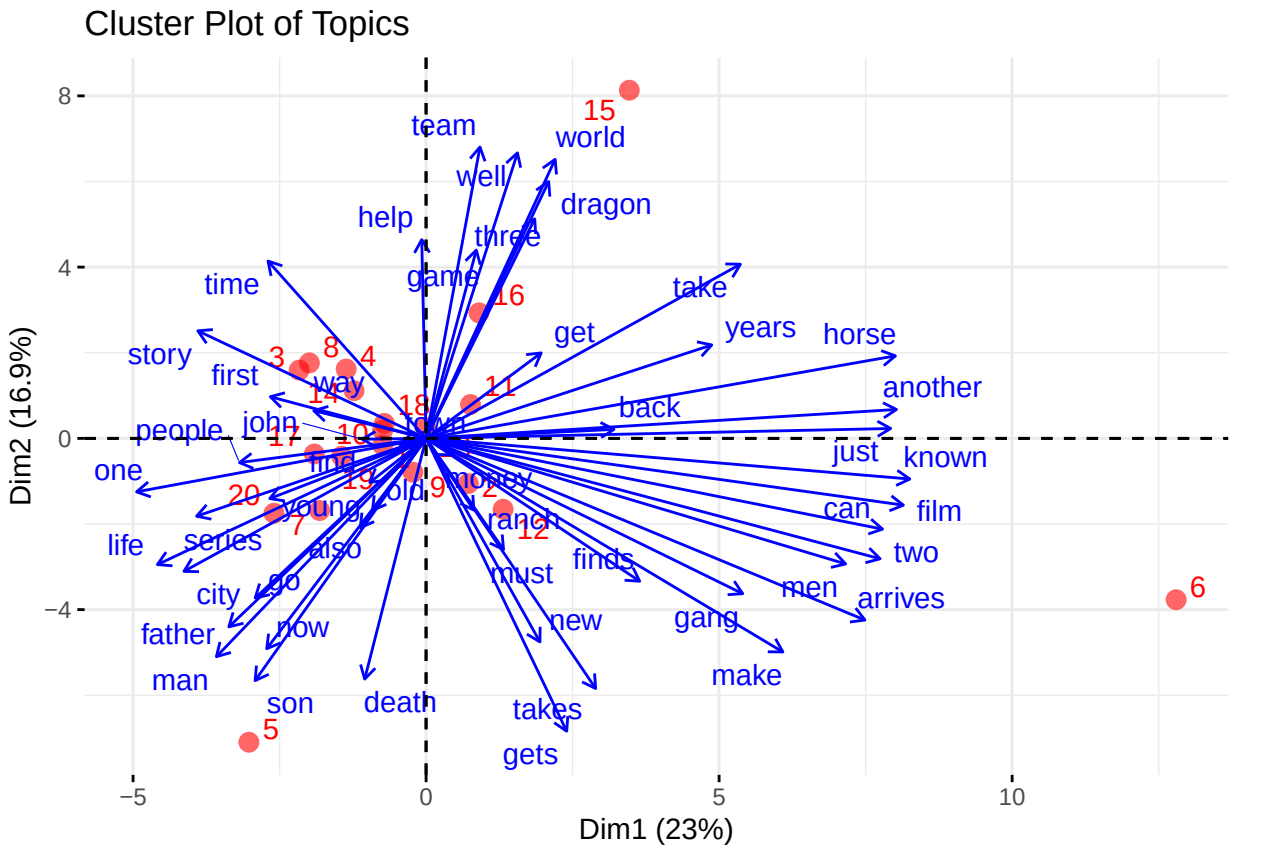
```
arrange(topic, -beta)
print(top_terms)
```

```
## # A tibble: 205 x 3
##    topic term       beta
##    <int> <chr>     <dbl>
##  1     1 town    0.00552
##  2     1 one     0.00545
##  3     1 action  0.00474
##  4     1 life    0.00427
##  5     1 new     0.00387
##  6     1 fight   0.00378
##  7     1 man     0.00347
##  8     1 two     0.00339
##  9     1 world   0.00300
## 10     1 mcguire 0.00296
## # i 195 more rows
```

```
ggplot(top_terms, aes(x = reorder_within(term, beta, topic), y = beta,
fill = factor(topic))) +
geom_col(show.legend = FALSE) +
facet_wrap(~ topic, scales = "free_y") +
coord_flip() +
scale_x_reordered() +
labs(title = "Top 10 Terms for Each Topic", x = "Terms",
y = "Beta (Probability)")
```



```r
filtered_topics <- topics %>%
group_by(term) %>%
summarize(total_beta = sum(beta)) %>%
top_n(50, total_beta)
topic_term_matrix <- topics %>%
filter(term %in% filtered_topics$term) %>%
spread(term, beta) %>%
column_to_rownames(var = "topic")

pca_result <- prcomp(topic_term_matrix, scale. = TRUE)

fviz_pca_biplot(pca_result,
repel = TRUE,
col.var = "blue",
col.ind = "red",
pointsize = 3,
alpha.ind = 0.6,
title = "Cluster Plot of Topics")
```

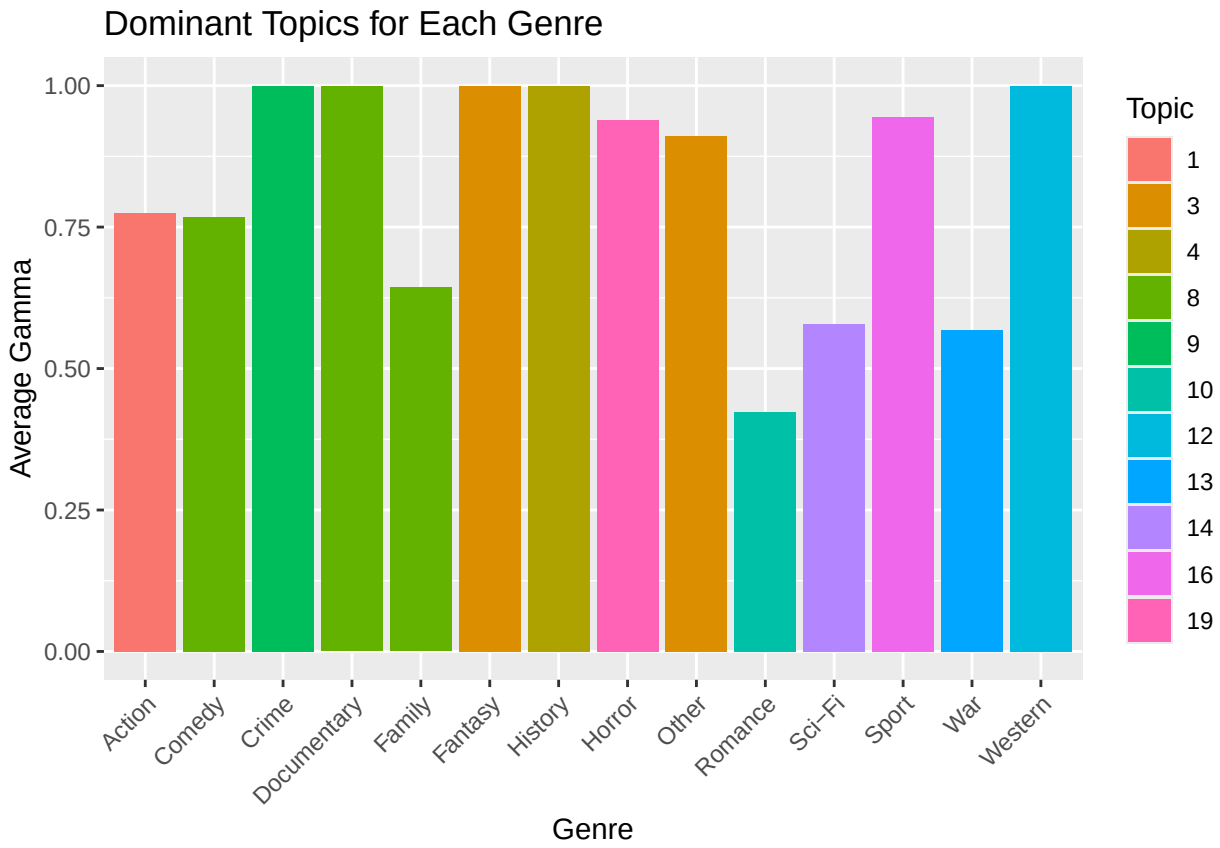



```r
doc_topic_matrix <- tidy(lda_model, matrix = "gamma")

genre_topic_distribution <- doc_topic_matrix %>%
rename(Genre = document) %>%
group_by(Genre, topic) %>%
summarize(avg_gamma = mean(gamma, na.rm = TRUE), .groups = "drop")

dominant_topics <- genre_topic_distribution %>%
```

```r
group_by(Genre) %>%
slice_max(avg_gamma, n = 1) %>%
ungroup()
print(dominant_topics)
```

```
## # A tibble: 14 x 3
##    Genre       topic avg_gamma
##    <chr>       <int>     <dbl>
##  1 Action          1     0.775
##  2 Comedy          8     0.769
##  3 Crime           9     1.00
##  4 Documentary     8     0.998
##  5 Family          8     0.643
##  6 Fantasy         3     1.00
##  7 History         4     1.00
##  8 Horror         19     0.939
##  9 Other           3     0.910
## 10 Romance        10     0.423
## 11 Sci-Fi         14     0.579
## 12 Sport          16     0.945
## 13 War            13     0.567
## 14 Western        12     1.00
```

```r
ggplot(dominant_topics, aes(x = Genre, y = avg_gamma, fill = factor(topic))) +
geom_col() +
labs(title = "Dominant Topics for Each Genre",
x = "Genre",
y = "Average Gamma",
fill = "Topic") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```

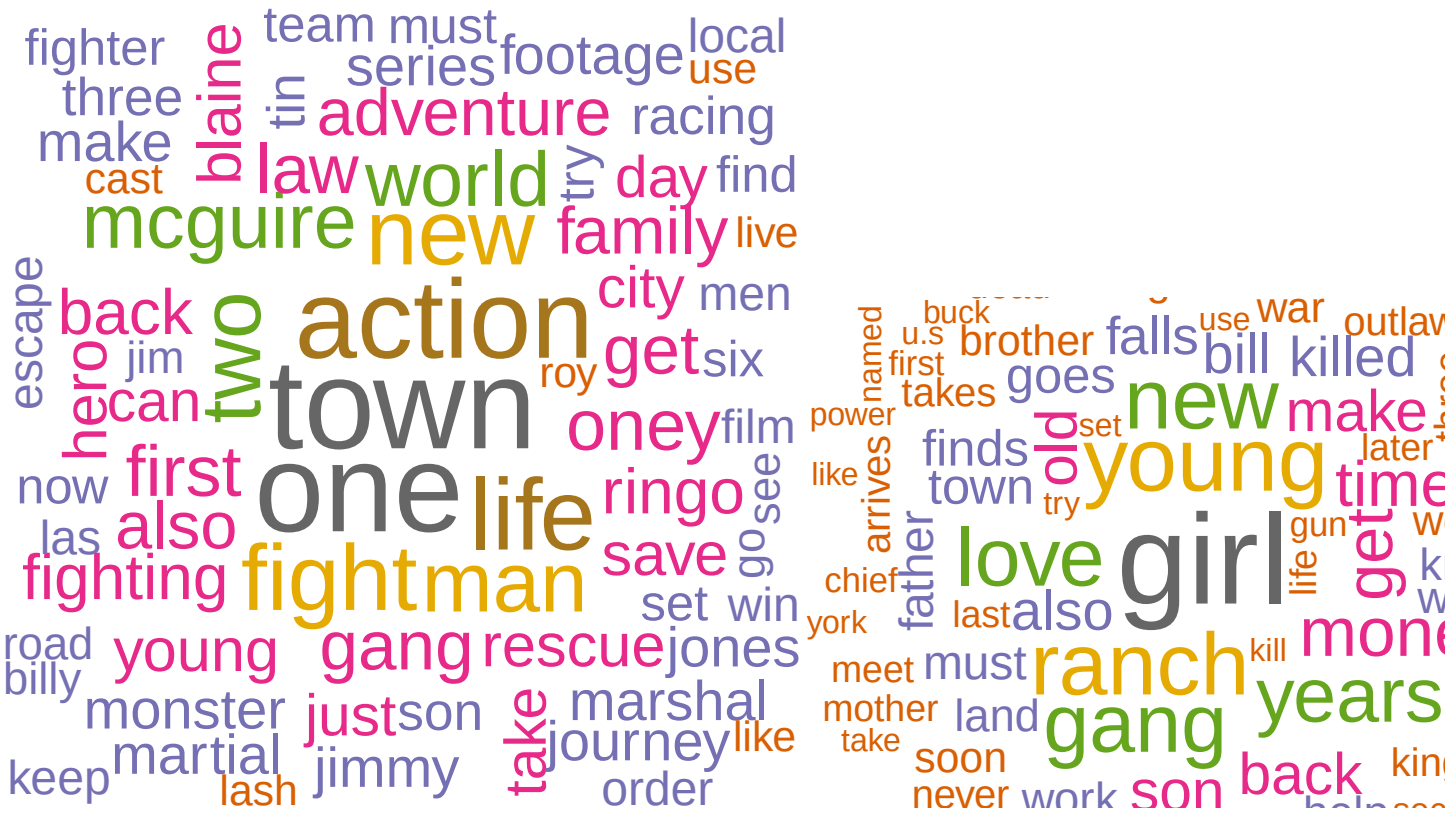



```
palette <- brewer.pal(8, "Dark2")

k <- 14
for (i in 1:k) {
topic_words <- topics %>%
filter(topic == i) %>%
arrange(desc(beta))

wordcloud(words = topic_words$term,
freq = topic_words$beta,
max.words = 100,
random.order = FALSE,
colors = palette)
}
```

```
## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## freedom could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## discover could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## california could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## behind could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## people could not be fit on page. It will not be plotted.
```

```
## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : away
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : horse
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : owner
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## scroll could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : jack
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : white
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## brother could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## championship could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : money
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : finds
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## saloon could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : gene
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : way
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : never
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## gunfighter could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : lives
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : round
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : brick
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : time
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : truck
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : stock
## could not be fit on page. It will not be plotted.
```

```
## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : wife
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : game
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## american could not be fit on page. It will not be plotted.
```




```
## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## skateboarding could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## became could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## workout could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## illustrated could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : woman
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## becomes could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## swimsuit could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : crown
## could not be fit on page. It will not be plotted.
```

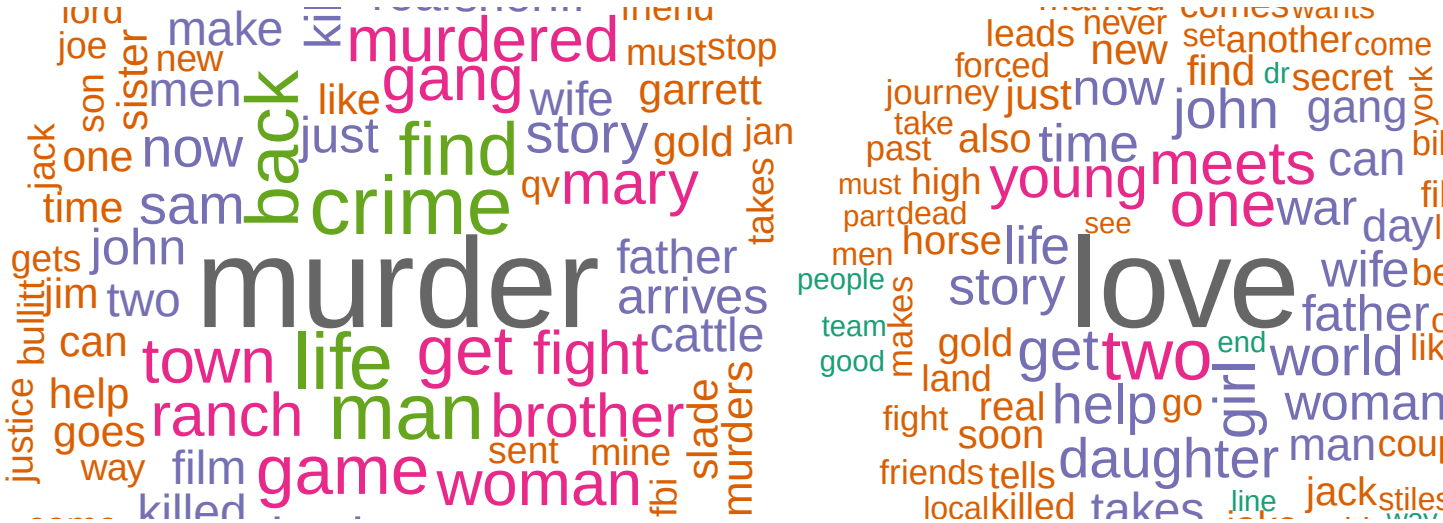
```
## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## fellows could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## special could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## champion could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## business could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## mission could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## behind could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## everything could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : takes
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : west
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : june
## could not be fit on page. It will not be plotted.
```


```
## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## discovered could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## indian could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## america could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## streets could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## justice could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## forced could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : great
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : west
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## attempt could not be fit on page. It will not be plotted.
```


```
## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## training could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## members could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : gang
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : thing
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## around could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## behind could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : story
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : way
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : boy
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : watch
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## documentary could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## swimming could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## trials could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : waves
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## saloon could not be fit on page. It will not be plotted.
```

```
## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : lion
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## homesteaders could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : terry
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## muhammed could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : joan
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## interviews could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : dam
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## explores could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## season could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : cup
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## sometimes could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : young
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## scenes could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## looking could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## government could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## person could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : santa
## could not be fit on page. It will not be plotted.
```

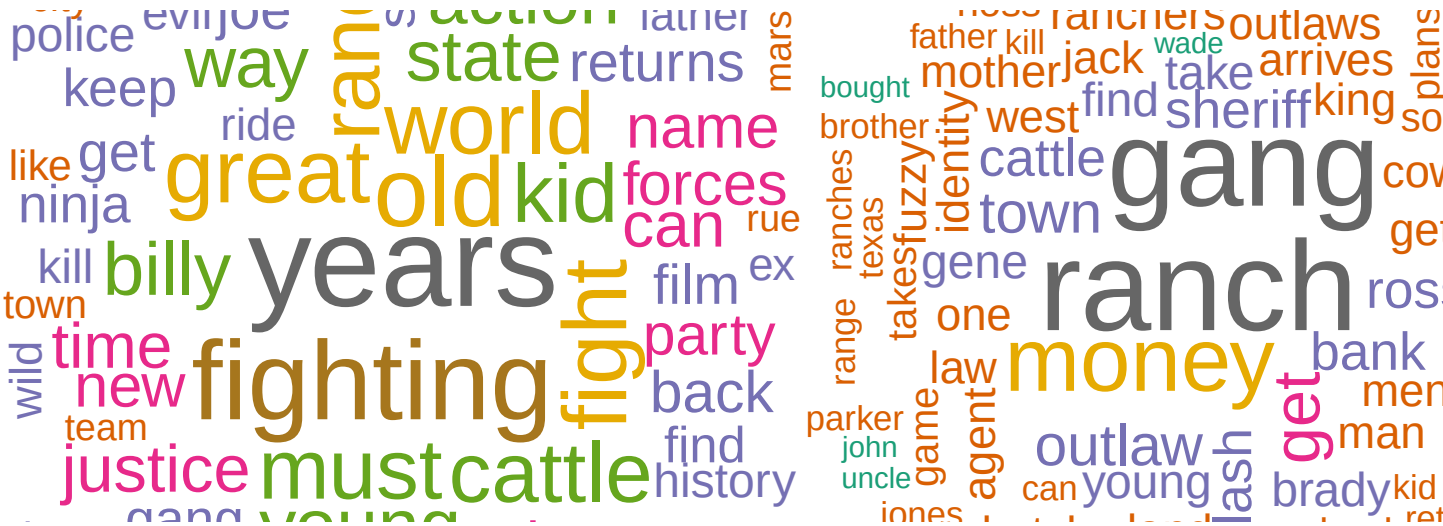

```
## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## escapes could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## crosby could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## cyclone could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## framed could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## investigate could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## shirley could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## toreno could not be fit on page. It will not be plotted.
```




```
## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : known
## could not be fit on page. It will not be plotted.
```

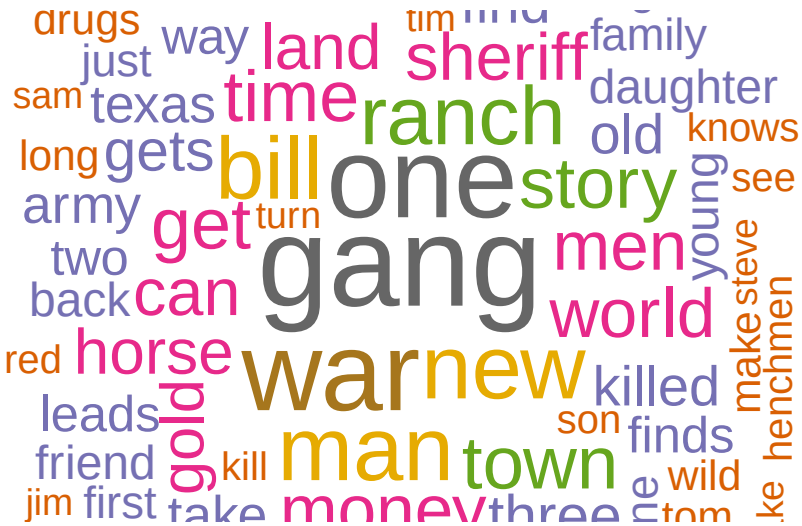
```
## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : ned
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## become could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : night
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : men
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## protect could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## estranged could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## continues could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : save
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : death
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## gunfight could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## making could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## gunfighter could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : quest
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : come
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## begins could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## masque could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : films
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : home
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : see
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## reputation could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : king
## could not be fit on page. It will not be plotted.
```

```
## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## homesteaders could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : judge
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## cowboy could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## framed could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## kobblestone could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## legend could not be fit on page. It will not be plotted.
```




```
## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## saunders could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## together could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : night
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : must
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : mary
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## behind could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : based
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## johnny could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## government could not be fit on page. It will not be plotted.
```

```
## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : great
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## attack could not be fit on page. It will not be plotted.
```

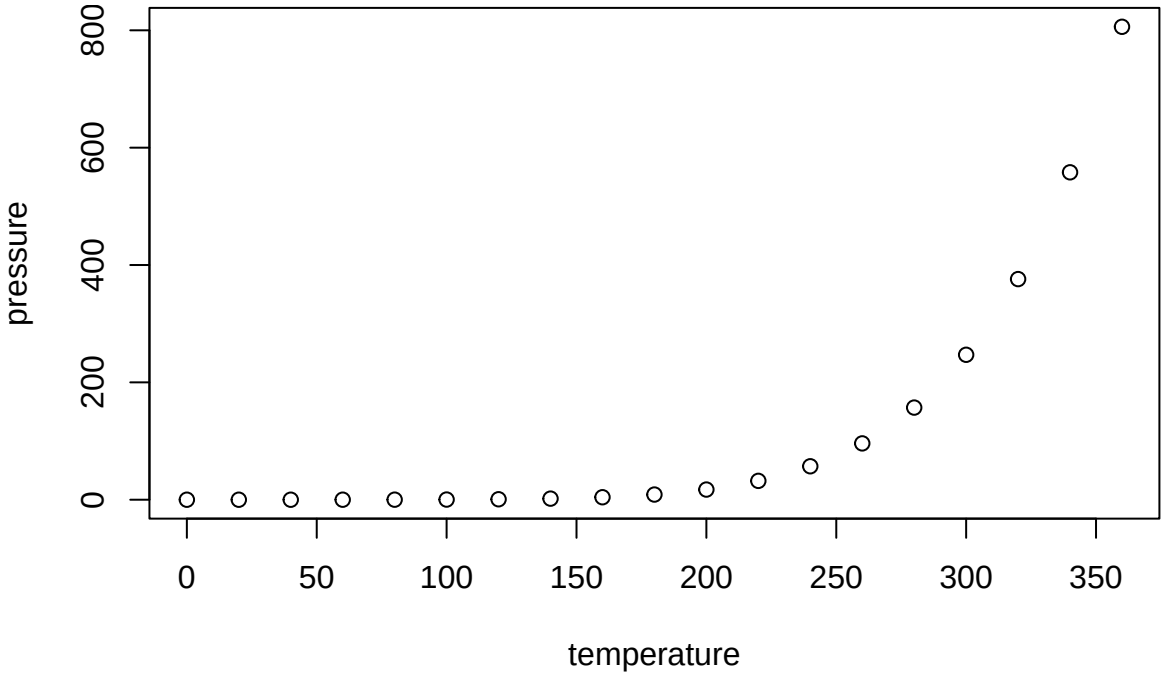



```
## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : star
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## mankind could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : named
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : james
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## government could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : every
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## attack could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : moon
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : small
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : may
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## mysterious could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : ghost
## could not be fit on page. It will not be plotted.

## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, :
## escape could not be fit on page. It will not be plotted.
```

```
## Warning in wordcloud(words = topic_words$term, freq = topic_words$beta, : bring
## could not be fit on page. It will not be plotted.
```

Including Plots

You can also embed plots, for example:



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.