Halloween Books Book

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Chapter 1

Poe

Edgar Allen Poe is a well known short story and poem writer that tended to write poems in the horror genre such as "The Raven", "The Cask of Amontillado", "The Tell-Tale Heart", and many other horror fan's favorites. The purpose of this paper is to look at the book, "The Complete Poetical Works Of Edgar Allen Poe" and find the most used words in his poetical works, just in time for Halloween.

1.1 "The Complete Poetical Works Of Edgar Allen Poe"

The first task is to get "The Complete Poetical Works Of Edgar Allen Poe" into R to be able to mine the text. First we need the libraries that we will use to mine the text.

```
library(tidytext)
library(tm)
library(wordcloud)
library(stringr)
library(dplyr)
library(knitr)
library(gutenbergr)
```

Then we use gutenbergr to extract the data into a data frame.

```
ids <- gutenberg_works(author == str_extract(author, "Poe, Edgar Allan"))
#get Poe work's IDs

head(ids$title)

## [1] "The Fall of the House of Usher"
```

```
## [2] "First Project Gutenberg Collection of Edgar Allan Poe"
## [3] "The Cask of Amontillado"
## [4] "The Masque of the Red Death"
## [5] "The Raven"
## [6] "The Works of Edgar Allan Poe <U+0097> Volume 1"

#see Poe work's IDs

df <- gutenberg_download(10031)
#get the complete poetical works of Edgar Allan Poe
```

The data frame now looks like this:

```
words_df <- df%>%
  unnest_tokens(word, text)
#split the lines into words

head(words_df)

## # A tibble: 6 x 2
##   gutenberg_id     word
##          <int>    <chr>
## 1        10031      the
## 2        10031 complete
## 3        10031 poetical
## 4        10031    works
## 5        10031       of
## 6        10031    edgar
```

Then we need to get rid of all the common words that do not give us anything unique in the text compared to other texts. We do this by using a list of words that are commonly used. This text is unique since it is written in an older English and has some extra common words that need to be filtered out past the normal list.

```
words_df <- words_df%>%
  filter(!(word %in% stop_words$word))
#get rid of common words that are not unique (the, a, etc.)
```

```
words_df <- words_df%>%
  filter(!word == "thy" & !word == "thou" & !word == "thee")
#some older words not in out stop_word list that are not useful
```

Now to create a count of each instance of a word. Using simple dplyr functions this can easily be done.

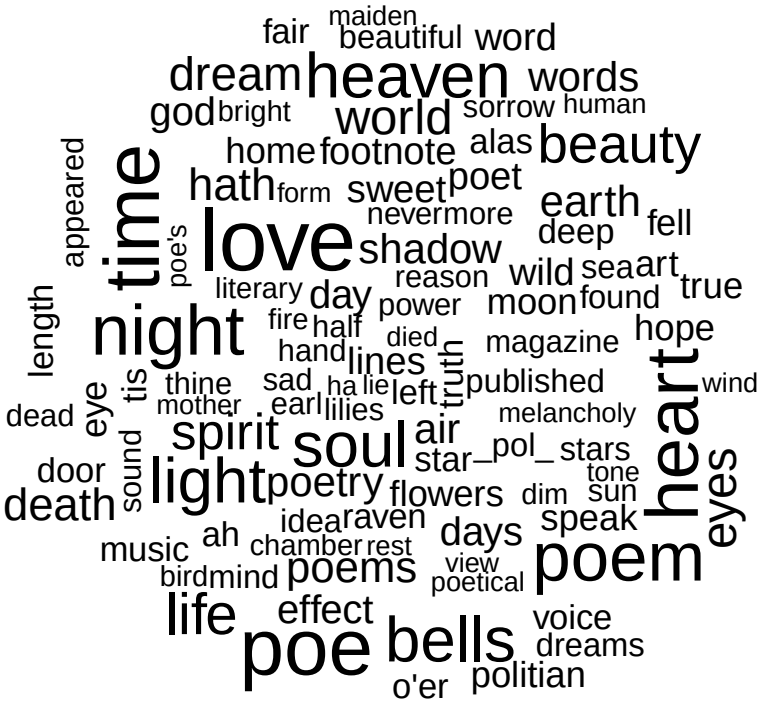
```
words_free <- words_df%>%
  group_by(word)%>%
  summarise(count = n())%>%
  arrange(-count)
#make a count of the word

head(words_free)
```

```
## # A tibble: 6 x 2
##    word count
##   <chr> <int>
## 1  love   116
## 2   poe   104
## 3  time   101
## 4 heart    96
## 5 night    90
## 6  poem    89
```

1.3 Wordcloud

Now we can create a wordcloud, a good visual representation of the most common words. The bigger the word the higher the frequency. We will use the library wordcloud to generate this image.

```
wordcloud(words_free$word, words_free$count, min.freq = 25)
```




```
#make a word cloud
```

Chapter 2

Romeo And Juliet

In this article we are constructing a wordcloud using the tidytext R package. Here we will be taking the words from the famous book Romeo and Juliets written by shakespear. We will extract all the words and convert it to a cloud of words in different shape and colurs using the package wordcloud.

2.1 Romeo and Juliet

is a tragic love story written by William Shakespeare early in his career.

2.2 The Gutenberg Package

This is a relatively new package for R,Gutenberg , that gives one access to all of the novels written by different authors.

```
library(janeaustenr)
library(dplyr)
library(tidytext)
library(gutenbergr)
library(wordcloud)
library(ggplot2)
library(stringr)
library(knitr)
```

Let's find the book for Romeo and Juliets by shakespear using gutenberg.

```
gutenberg_works(str_detect(title,'Romeo'))
```

```
## # A tibble: 3 x 8
##   gutenberg_id
##          <int>
```

```
## 1         1513
## 2        22274
## 3        47960
## # ... with 7 more variables: title <chr>, author <chr>,
## #   gutenberg_author_id <int>, language <chr>, gutenberg_bookshelf <chr>,
## #   rights <chr>, has_text <lgl>
```

Let's now download and store it into a data frame.

```
  Romeo<-gutenberg_download(1513)
```

2.3 Some Data Cleaning

Adding a new column of line to get the line numbers and clean the id to Null.

```
Romeo$line<-1:5268
Romeo$gutenberg_id<-NULL
```

2.4 The wordcloud

To make the word cloud, we first need to break up the lines into words. We can use the function from package tidytext for this.

```
  Romeo_words<-Romeo%>%
  unnest_tokens(word,text)
```

We can remove common, unimportant words with the stop_words from the data frame with dplyr.

```
  Romeo_words<-Romeo_words%>%
  filter(!(word %in% stop_words$word))
```

Since this is a tragic love story, so lets only take the joy and sadness word sentiments out of it.

```
nrc<-get_sentiments('nrc')
joy_sad<-nrc%>%
filter(sentiment == 'joy' | sentiment == 'sadness')
```

Lets takeout all the joy and sadness words to a dataframe.

```
Romeo_joy_sad<-inner_join(Romeo_words,joy_sad)
```

Now we need to calculate frequencies of the words in the novel. Again, we can use standard techniques for this:

```
Romeo_frequency<-Romeo_joy_sad%>%
group_by(word)%>%
summarise(frequency = n())
```

Finally lets view our wordcloud.

```
wordcloud(Romeo_frequency$word,Romeo_frequency$frequency)
```