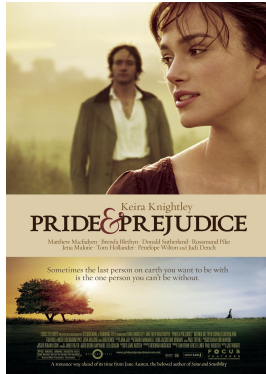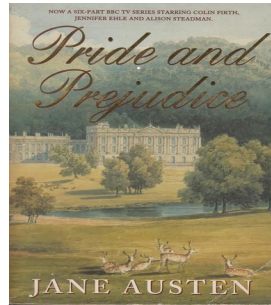# Book 2 Movie Recommender

Sibongile Toure

Problem Statement

- Create a recommender system that take the plot of a book and returns movies with a similar description

Data and Tools

- Data
  - IMDb most popular movies from 1950-2020 with a rating of 6.5 and above
  - Goodreads book data consisting of the 50.000 most popular books
- Tools
  - BeautifulSoup
  - IMDbpy
  - NLTK
  - Sklearn

IMDb goodreads

Exploratory Data Analysis

- IMDB Movie Data
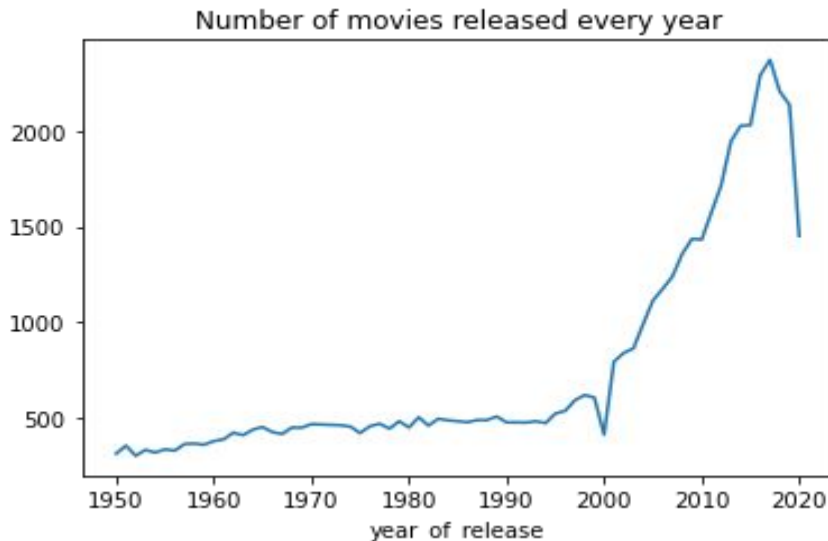 - Features
    - Plot
    - Title
    - Genres
    - Directors
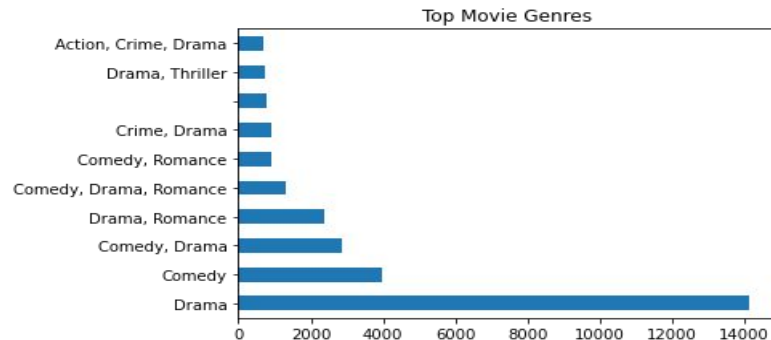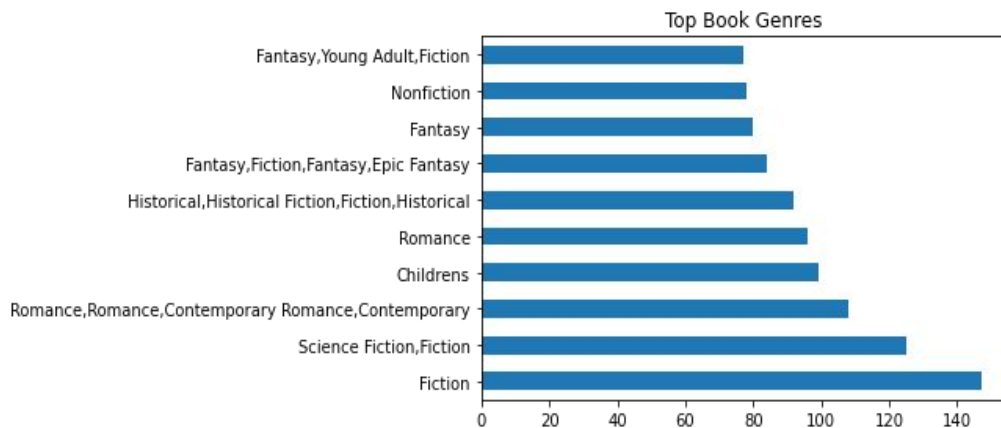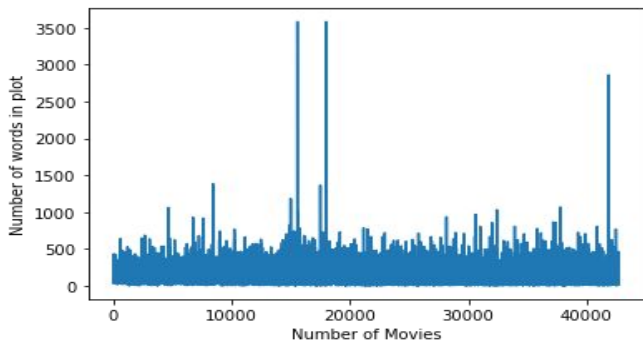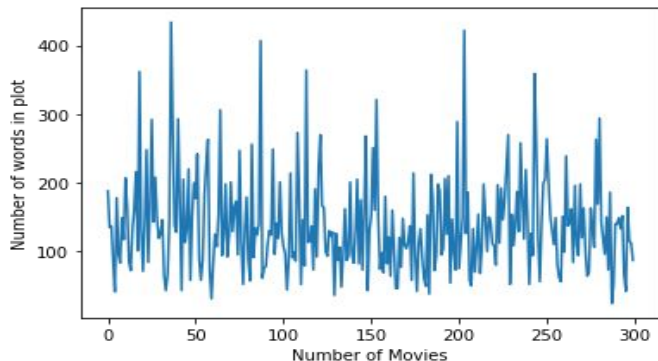   - Release Date
    - Release Year

- Goodreads Book Data
  - Features
    - Book Authors
    - Book Description
    - Book Title
    - Genres

Number of movies released every year

year_of_release

Combining Datasets

Comparing Books and Movies

The Hunger Games Book Desc

Winning will make you famous. Losing means certain death.The nation of Panem, formed from a post-apocalyptic North America, is a country that consists of a wealthy Capitol region surrounded by 12 poorer districts. Early in its history, a rebellion led by a 13th district against the Capitol resulted in its destruction and the creation of an annual televised event

known as the Hunger Games.
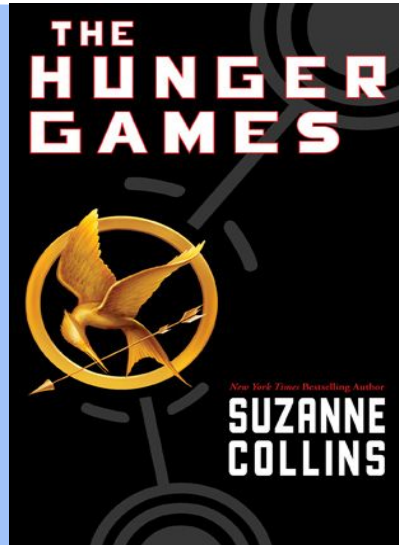
The Hunger Games Film Desc.

In order to control future rebellions by remembering the past rebellion, the Powers That Be of the dystopian society of Panem force two youngsters from each of the twelve districts to participate in The Hunger Games. The rules are very simple: the twenty-four players must kill each other and survive in the wilderness until only one remains. The games are broadcast through the Capital and the twelve districts to entertain and intimidate the population.
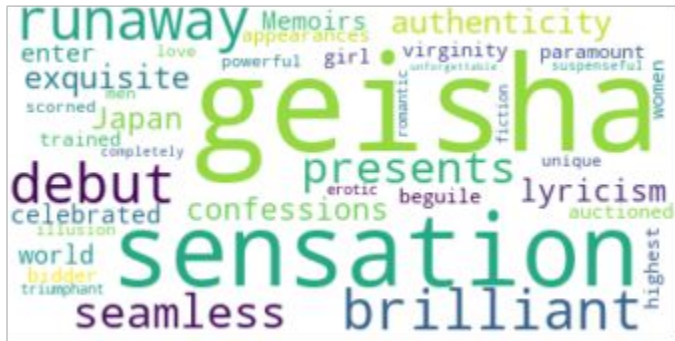
Streamlit

Recommendations
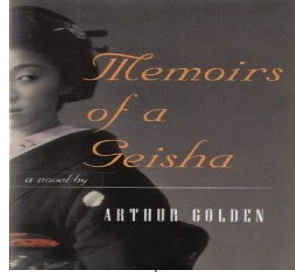
Comparing Plots
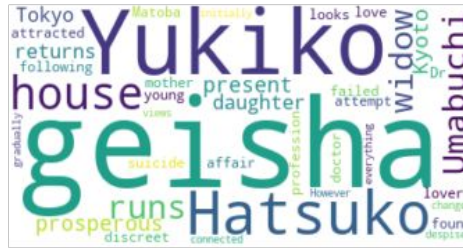
Future Work

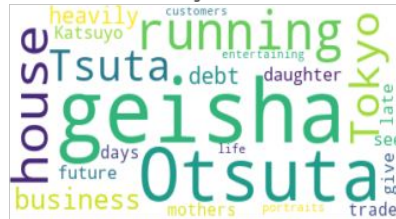### Recommender Improvements

- Map Film and Book genres
- Incorporate users

App Improvements

- For the recommended movies give a ways to watch option

Questions?

Appendix

<u>Film Topics Modeling -LDA</u>

- Topic 1: mother, father, son, child, famili, live, children, wife, life, daughter
- Topic 2: life, world, love, live, past, man, dream, young, chang, journey
- Topic 3: love, fall, marri, fall love, girl, young, man, famili, daughter, marriag
- Topic 4: brother, famili, young, woman, father, villag, man, fight, sister, love
- Topic 5: murder, polic, kill, investig, gang, crime, prison, killer, case, crimin
- Topic 6: friend, town, small, best, boy, best friend, summer, life, love, friendship
- Topic 7: school, music, student, play, high, high school, life, actor, perform, band
- Topic 8: war, armi, soldier, german, world, group, king, american, militari, battl
- Topic 9: life, live, famili, differ, peopl, social, love, relationship, like, friend
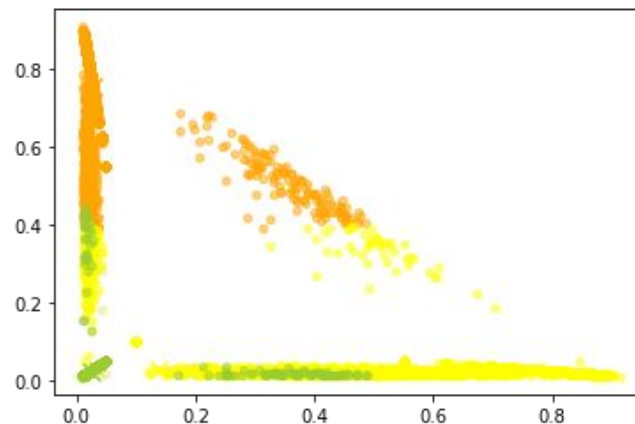- Topic 10: comedi, friend, life, love, man, guy, car, live, hotel, parti

Appendix

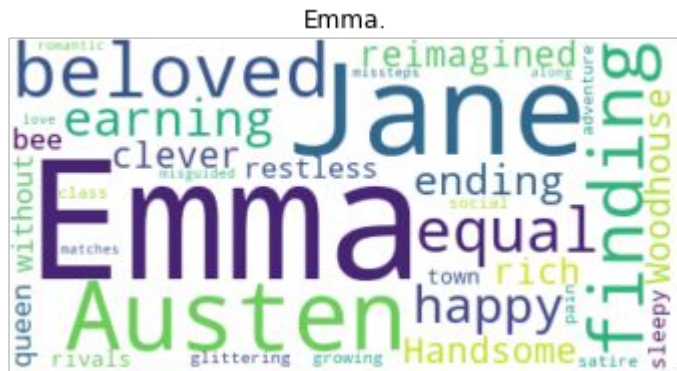- Film topics over time
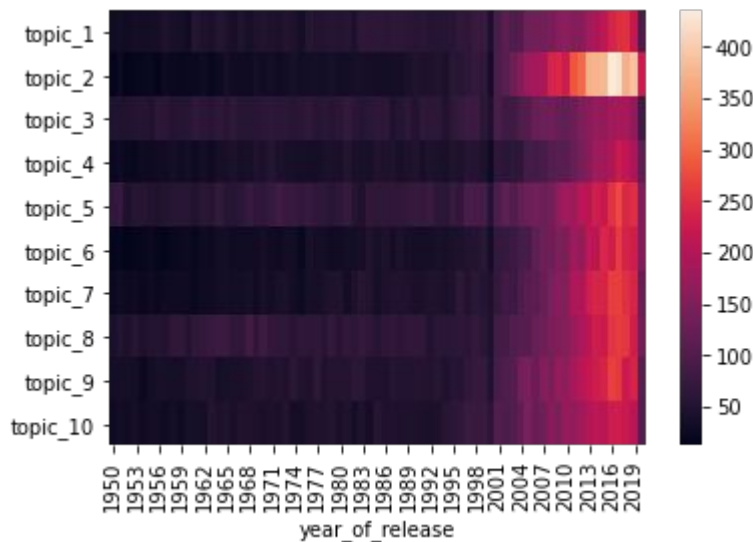
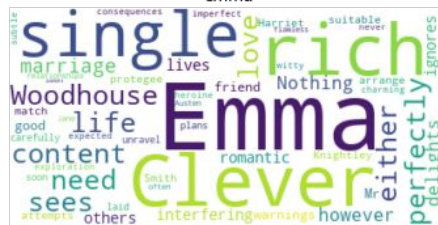- KMeans Clustering on Films
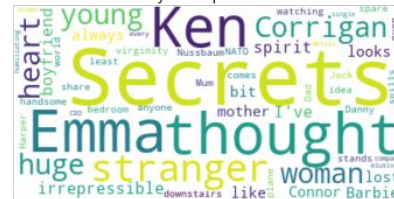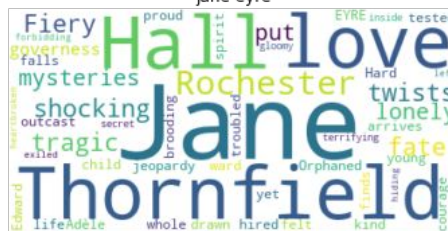 - Kmeans with 4 clusters

Appendix

Movie2Book word clouds