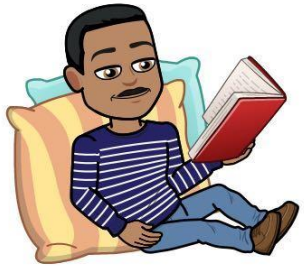
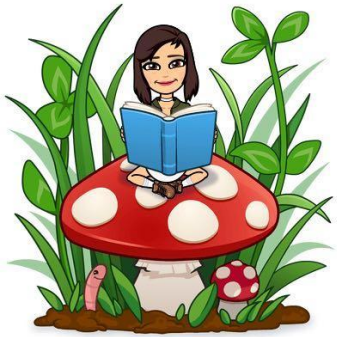
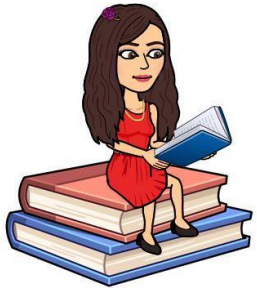
Bookmoji

A book recommender app

Sonam Karia

Problem Statement for building the app

I built a book recommender system by using natural language processing to preprocess book description and user ratings followed by building an unsupervised learning model to provide book recommendations to users

Data Collection Techniques

Book ratings

Web scraping tools

- Selenium
- Beautiful Soup

- 8000 books scraped
- 10 pages per book for ratings
- Book id, Book name and ratings were scrapped
- 10 - 15 seconds per book

Book description

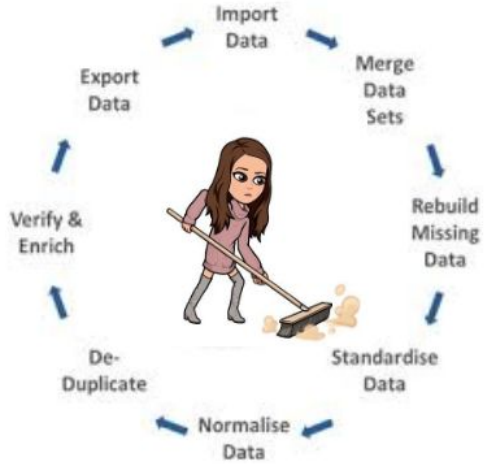
Web scraping tools

- Selenium
- Beautiful Soup

- 4000 books scraped
- 1 page per book
- Book id, Book name and description
- 5 seconds per page

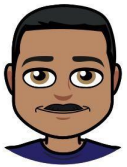
Data Cleaning and Exploratory Data Analysis

- Natural Language processing for book description based dataset
- Data cleaning using regex (lower case words, removed punctuations and special characters)
- Dropped duplicates
- Dropped unwanted columns
- Mapped book ratings on a scale of 1-5

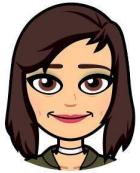


Item Based Recommender (user ratings)

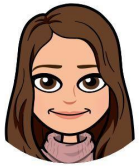
De'Varus

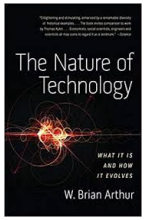


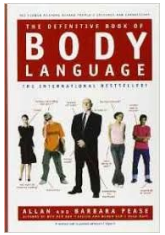
Sibel

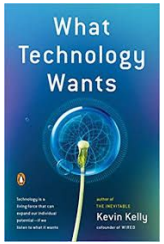


Sonam

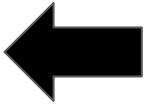




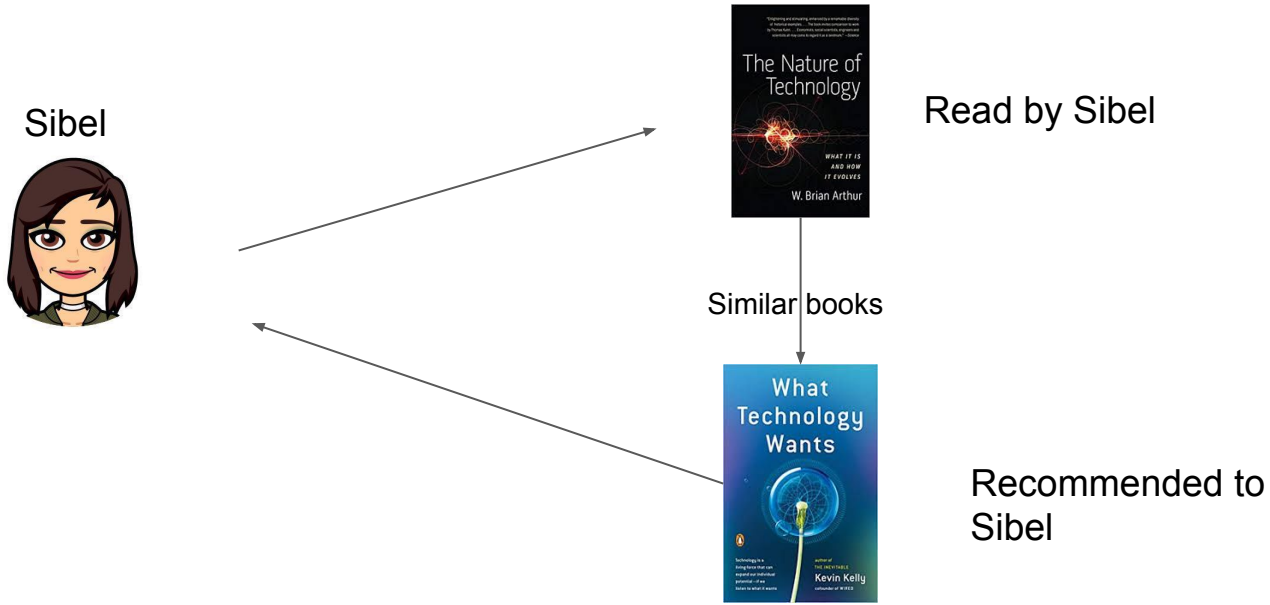




Recommends this book to Sonam

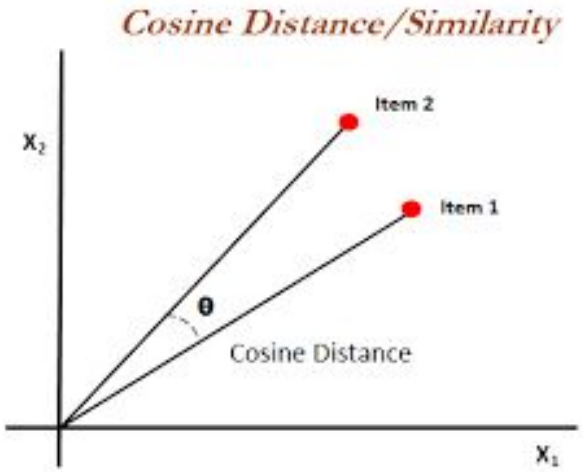


Content Based Recommender (book description)

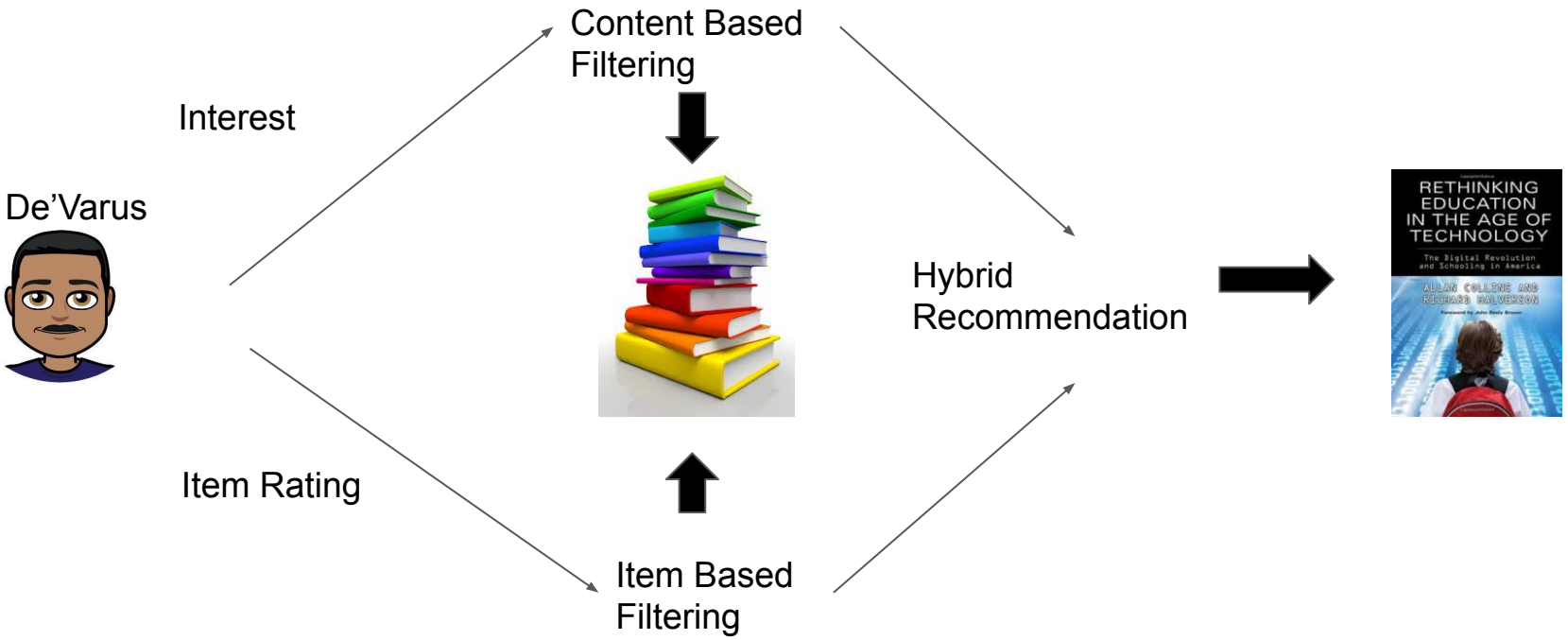


Metric used to calculate similar books: Pairwise Distance

The process of calculating similar books to user based on book description and book ratings was done using pairwise distances



Hybrid Recommender



Recommendations and next steps

- Collect more data for better results
- Use AWS to run large amount of data
- More Natural Language processing for Content based recommender
- Add purchase links from amazon for the recommended books
- Recommend book meet ups for the books a user likes
- Take feedbacks from user to understand if the recommendations are helpful

References

- https://www.bitmoji.com/
- https://www.oreilly.com/library/view/statistics-for-machine/9781788295758/eb9cd609-e44a-40a2-9c3a-f16fc4f5289a.xhtml

Questions ?