

# Book Recommendation

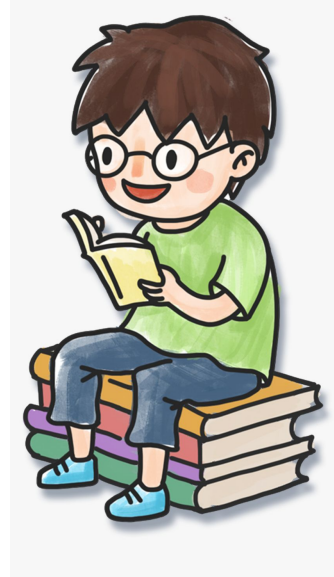


Group 6

# User Story



Gram is an 85 year-old women living alone in a retirement home. She is a voracious reader but is sick of reading the same thing. She does not understand technology nor has any desire to learn.



George is a 20 year-old college student. He is looking for escapist fiction but that is not a genre label so he has hard time finding them. He has no friends and depends on reddit to streamline this search.

# AWS Dashboard



Amazon EC2

# AWS Dashboard

## Front-End

- Purely HTML, CSS design
- A small portion of Javascript

## Back-End

- Flask, Python.
- Import the model functions from model.py files
- Run them on app.py, which is the main control panel we use for the whole operation of the website.
- Use GET, POST methods to obtain the queries from front-end and send them to the models for further processing.

# AWS Dashboard



Overview

Datasets

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About Us

## Group 6

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### Database

The world is one big data problem! Take a look at our immersive databases and how we process data to provide you the best book to read next.



[Read more →](#)

### Explore More

In this section, we provide static and dynamic graphs to help you to find your own insights. You will know what's the trending books, genre, authors right now. Come in and explore!



[Read more →](#)



### Find a Book

Still want to hear our suggestions? We have developed advanced machine learning models to generate personalized book recommendations only for you.

[Read more →](#)



### About Us

Who are we?  
Want to know more about our team or have other questions?

[Github Link →](#)

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# Data Visualization



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[Click to the Dataset](#)

Books:  
126674

Unique Genres:  
5773

Authors:  
58900

Different Countries:  
164

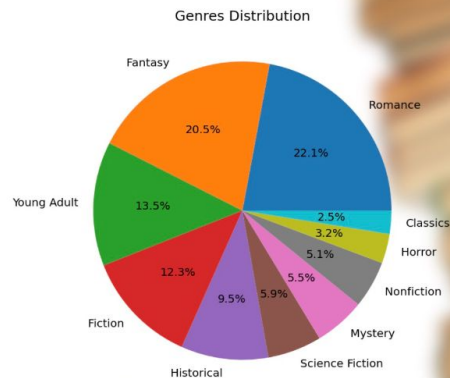
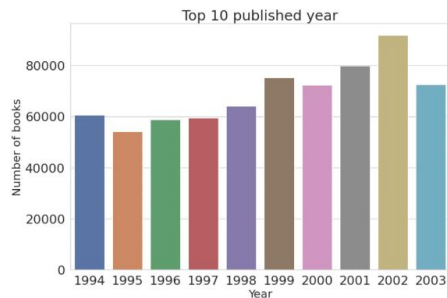
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# Explore More - Fantasy Category

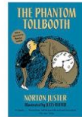


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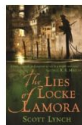
Discover Your Favorite books

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Title: Red Queen  
Author: Victoria Aveyard  
Avg Rating: 9.5/10

[Click to Purchase](#)

Title: The Phantom Tollbooth  
Author: Norton Juster  
Avg Rating: 8.8/10

[Click to Purchase](#)

Title: The Lies of Locke Lamora  
Author: Scott Lynch  
Avg Rating: 9.4/10

[Click to Purchase](#)

Title: Gardens of the Moon  
Author: Steven Erikson  
Avg Rating: 8.9/10

[Click to Purchase](#)

Title: Nanny McPhee and the Big Bang  
Author: Emma Thompson  
Avg Rating: 8.1/10

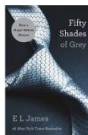
[Click to Purchase](#)

# Explore More - Romance Category

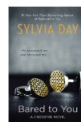


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Title: Fifty Shades of Grey  
Author: E. L. James  
Avg Rating: 8/10

[Click to Purchase](#)

Title: Bared to You  
Author: Sylvia Day  
Avg Rating: 8.8/10

[Click to Purchase](#)

Title: Taking Chances  
Author: Molly McAdams  
Avg Rating: 8.4/10

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Title: Easy  
Author: Tammara Webber  
Avg Rating: 9.0/10

[Click to Purchase](#)

Title: Gabriel's Inferno  
Author: Sylvain Reynard  
Avg Rating: 8.8/10

[Click to Purchase](#)

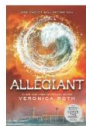


# Explore More - Young Adult Category



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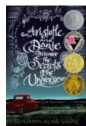
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Title: Allegiant  
Author: Veronica Roth  
Avg Rating: 8.2/10

[Click to Purchase](#)

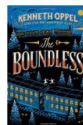
Title: The Sisterhood of the Traveling Pants  
Author: Ann Brashares  
Avg Rating: 9.4/10

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Title: Aristotle and Dante  
Discover the Secrets  
of the Universe  
Author: Benjamin Alire Sáenz  
Avg Rating: 9.4/10

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Title: Among the Hidden  
Author: Margaret Peterson Haddix  
Avg Rating: 9.4/10

[Click to Purchase](#)

Title: The Boundless  
Author: Kenneth Oppel  
Avg Rating: 9.0/10

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# Book Recommendation System

- Item-based Collaborative Filtering
  - User Rating, Book Titles
- Content-Based Collaborative Filtering
  - Title, Author, Publisher and Genre
- Cosine Similarity
  - Feature Vector Distance
- Mixed Model

# Dashboard Demo



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### Recommendation System

Please Input a String (Based on the model)

- ✓ Select a model
- Summary (Cosine Similarity)
- Title (Collaborative Filtering)
- Books Info (Collaborative Filtering)
- Mixed

Search

#### How to use our Recommendation System?

As simple as it may seem, put the title of the book and get recommendation!

!Warning:

BEAWARE of book series such as Harry Potter, you have to input the complete book name, e.g. Harry Potter and the Chamber of Secrets (Book 2), Emma (Signet Classics (Paperback))

If there is a typo or mismatch in the book title, the system is unable to generate any recommendation.

Select a model:

We have prepared multiple models so you can choose the one that fits your needs. For example, if you want to be recommended with similar content of the book title you put in the first box, then select Title.

# Our Team



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### Processing Team:

Fangning Cao,  
Ximei Wu

### Modeling Team:

Conghao Liu,  
Gordon Duncan,  
Jiayue Li

### AWS Team:

Joyce Huang,  
Zhenwei Liu

### Roles and Responsibilities:

#### Processing Team:

Good recommendations rely on a strong Database! Our processing team is the foundation of our product. They are responsible for collecting the data from multiple sources, cleaning the raw data and extracting key information.

#### Modeling Team:

Then the baton is passed to the modeling team, which trains and utilizes advanced machine learning models. The model is smart enough to learn your preferences and generate your next favorite book.

#### AWS Team:

Last but not least, the AWS team created everything you see on our website. The layout, buttons, and functionalities are all created by them. We host our dashboard on an online server, so our service is always within reach!

# Future Work

- Login Profile
- More personalized recommendations