

Book

Recommendation App

Python Intermediate - Zeynep B. SAHIN

Why Book Recommendation App and the Process:

- I like reading books.
- I like to see similar books that I have read previously.
- I like when an app gives me recommendations for my next book.

Book id	Title	Author	average_rating	isbn	isbn13	language_code	num_pages	ratings_count	text_reviews_count	publication_date	publisher	
0	1	Harry Potter and the Half-Blood Prince (Harry ...)	J.K. Rowling/Mary GrandPré	4.57	0439785960	9780439785969	eng	652	2095690	27591	9/16/2006	Scholastic Inc. AdultFictionF
1	2	Harry Potter and the Order of the Phoenix (Har...	J.K. Rowling/Mary GrandPré	4.49	0439358078	9780439358071	eng	870	2153167	29221	9/1/2004	Scholastic Inc. AdultFictionF
2	4	Harry Potter and the Chamber of Secrets (Harry...	J.K. Rowling	4.42	0439554896	9780439554893	eng	352	6333	244	11/1/2003	Scholastic Inc. AdultF
3	5	Harry Potter and the Prisoner of Azkaban (Harr...	J.K. Rowling/Mary GrandPré	4.56	043965548X	9780439655484	eng	435	2339585	36325	5/1/2004	Scholastic Inc. AdultF
4	8	Harry Potter Boxed Set Books 1-5 (Harry Potte...	J.K. Rowling/Mary GrandPré	4.78	0439682584	9780439682589	eng	2690	41428	164	9/13/2004	Scholastic Inc. AdultFictionF

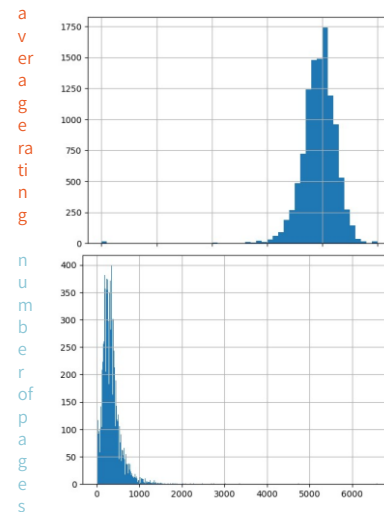
- Used 2019 dataset created by Goodreads API.
- It's been updated in 2022 with genre information.
- Found the dataset through **Kaggle**.
- The dataset includes **11030 non-null** rows and 13 columns/variables.
- Columns include informations about: Book ID, **title**, **author**, **average rating**, isbn, isbn13, **language of books**, **number of pages**, **ratings count**, **text reviews count**, publication data, publisher, **genres**.
- In this project;
 - **Pandas**
 - **Matplotlib**
 - **Wordcloud**



Difficulties During the Process:

Data is clean **BUT:**

- Outliers
- Genres column
- Deciding to use which variable for measurement.
- Learning Modules:
 - [Pandas: Coray Schafer Python Pandas Youtube Playlist](#)
 - [Matplotlib: Coray Schafer Python Matplotlib Youtube Playlist](#)
 - Wordcloud



```
fiction
nonfiction
classics;cultural,russia;literature;literature,russian literature;philosophy;novels;literature,19th century;classics,classic literature;religion;historical,historical
classics;poetry;fiction;fantasy,mythology;literature;fantasy;historical,historical fiction;academic,school;mythology,greek mythology;war
classics;fiction;horror;fantasy;gothic;literature;novels;literature,19th century;lgbt;classics,classic literature

romance;romance,contemporary romance;contemporary;womens fiction,chick lit;fiction;family;category romance,harlequin;romance,category romance;adult;historical
romance;romance,contemporary romance;harlequin,harlequin desire;category romance,harlequin
cultural,japan;asian literature,japanese literature;nonfiction;classics;history;autobiography,memoir;biography;poetry;biography memoir;literature
alcohol,wine
nonfiction;sociology;social issues,povertry;history;economics;politics;writing,journalism;literature,american;the united states of america;travel
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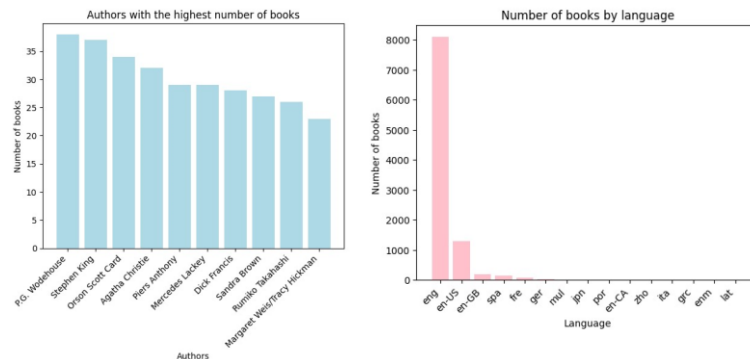
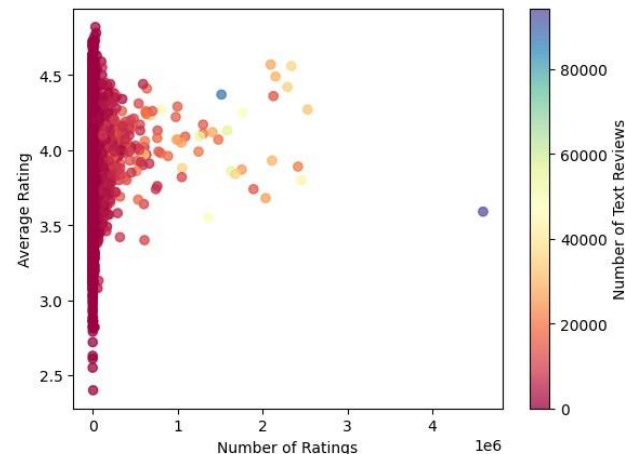
Top 10 most read books with average ratings:

	average_rating	Title	Author
10340	3.59	Twilight (Twilight #1)	Stephenie Meyer
1697	4.27	The Hobbit or There and Back Again	J.R.R. Tolkien
1462	3.80	The Catcher in the Rye	J.D. Salinger
307	3.89	Angels & Demons (Robert Langdon #1)	Dan Brown
3	4.56	Harry Potter and the Prisoner of Azkaban (Harr...	J.K. Rowling/Mary GrandPré
4416	4.42	Harry Potter and the Chamber of Secrets (Harry...	J.K. Rowling/Mary GrandPré
1	4.49	Harry Potter and the Order of the Phoenix (Har...	J.K. Rowling/Mary GrandPré
23	4.36	The Fellowship of the Ring (The Lord of the Ri...	J.R.R. Tolkien
2114	3.93	Animal Farm	George Orwell/Boris Grabnar/Peter Škerl
0	4.57	Harry Potter and the Half-Blood Prince (Harry ...	J.K. Rowling/Mary GrandPré

10 most reviewed books with average ratings:

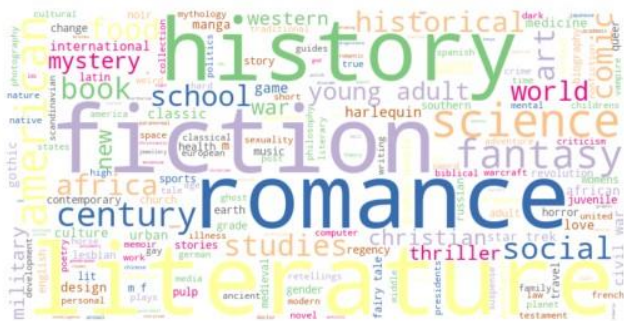
	average_rating	Title	Author
10340	3.59	Twilight (Twilight #1)	Stephenie Meyer
5272	4.37	The Book Thief	Markus Zusak/Cao Xuân Việt Khương
1069	4.13	The Giver (The Giver #1)	Lois Lowry
284	3.86	The Alchemist	Paulo Coelho/Alan R. Clarke/Özdemir İnce
10704	4.09	Water for Elephants	Sara Gruen
7312	4.25	The Lightning Thief (Percy Jackson and the Oly...	Rick Riordan
5409	3.55	Eat Pray Love	Elizabeth Gilbert
2060	4.27	The Glass Castle	Jeannette Walls
1462	3.80	The Catcher in the Rye	J.D. Salinger
3	4.56	Harry Potter and the Prisoner of Azkaban (Harr...	J.K. Rowling/Mary GrandPré

Exploring the Data:



The Product & The Outcome:

- The main aim of this project is to ask users/readers *to recommend their next book based on genres they choose.*
- Users can *decide how many genres they want* to write. Program raises an error if genre is not found or with a typing error.
- User had *3 trials for each genre selection.*
- **848** unique genres.



Please write how many genres you want to choose, please write a number: (Press 'Enter' to confirm or 'Escape' to cancel)

You have chosen to write 3 genres.

Invalid genre. Please try again

The genres you have chosen are: ['fiction', 'romance', 'literature']

According to the genres you have chosen fiction, romance, literature:

Top 10 books I have chosen for you by rank (Highest to Lowest):

Rank 1: Romeo and Juliet by William Shakespeare/Paul Werstine/Barbara A. Mason

Rank 2: Little Women by Louisa May Alcott

Rank 3: Jane Eyre by Charlotte Brontë/Michael Mason

Rank 4: Gone with the Wind by Margaret Mitchell

Rank 5: The Count of Monte Cristo by Alexandre Dumas/Robin Buss

Rank 6: Emma by Jane Austen/Fiona Stafford

Rank 7: Persuasion by Jane Austen/James Kinsley/Anna Massey/Richard S. Hart

Rank 8: Never Let Me Go by Kazuo Ishiguro

Rank 9: Love in the Time of Cholera by Gabriel García Márquez/Edith Grossman

Rank 10: Like Water for Chocolate by Laura Esquivel/Thomas Christensen/Carmen

Future Steps:

- It can be part of a website, such as goodreads, 1000kitap, or any online bookshop.
- Recommendation system can be based on random book selection instead of genres.
- Extensive, culturally varied, and current data is needed.
- Recommendation can be extended for language.



Your inputs or questions?



Original code source: https://github.com/zeybus/Book_Recommendation_Project

Thank You!

