Discover Your Next Favorite Book

A Smart Recommendation System • Finding books you'll love, effortlessly

Nisha Singla

Personalized

Tailored to your reading preferences

Community-Powered

Based on millions of reader ratings

Smart Algorithm

Advanced recommendation techniques

Time-Saving

Find great books without the guesswork

The Challenge & Our Solution

The Challenge

- **Too many choices** — millions of books available
- **Limited time** to find books you'll enjoy
- **Generic recommendations** don't match personal taste

Our Solution

- **Smart system** that learns your reading preferences
- **Community insights** from millions of reader ratings
- **Personalized picks** — books you'll actually enjoy

What We Studied

Our book recommendation system is built on extensive data from real readers and their preferences.

271K

Books

Diverse collection across all genres and authors

278K

Readers

Active book enthusiasts sharing their opinions

1.14M

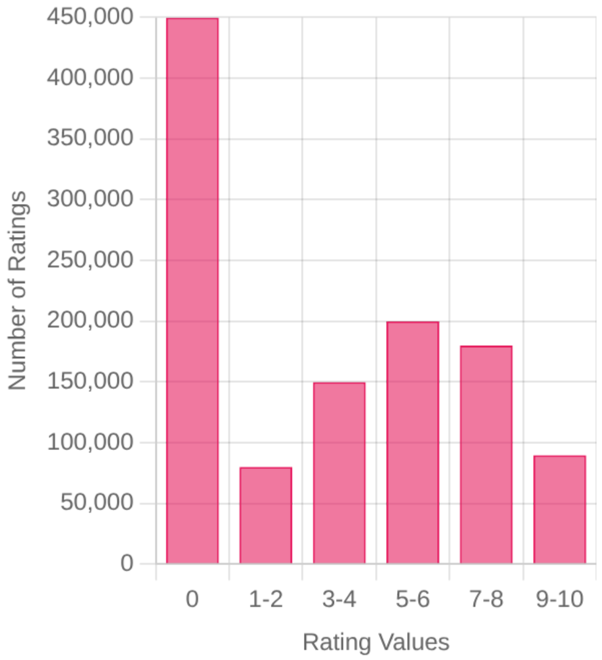
Reviews

Detailed ratings and feedback on books

We focused on books with **50+ reviews** and readers who rated **200+ books** to ensure quality recommendations

What Readers Told Us

Rating Patterns



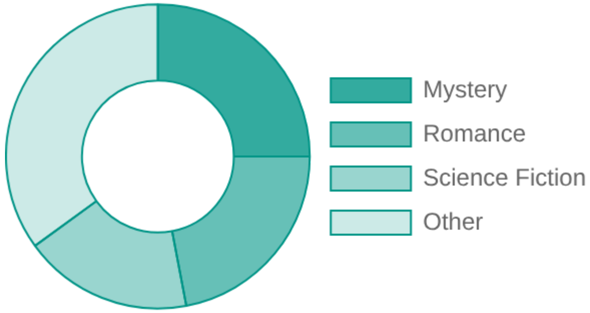
7-10

Most common ratings

4.5

Average rating

Popular Categories



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Top categories

65%

Of all ratings

Reader Patterns

Readers who like **one book by an author** often enjoy their others

Series books receive consistently high ratings from readers

Readers with **similar tastes** tend to like the same books

Getting Our Bookshelf in Order

Raw Data

Initial datasets with missing values

Clean Data

Handle missing values

Filtered Data

Select active users & popular books

Ready to Use

Organized for recommendations

Quality Focus

- **50+ reviews** per book minimum
- **200+ ratings** per active reader
- **No duplicates** in any dataset

Messy Data → Organized Data

Smart Filtering

- **Active readers** who review frequently

```
x = ratings.groupby('User-
ID').count()['Book-Rating'] >=
200
```

- **Popular books** with many reviews

```
y =
filtered_rating.groupby('Book-
Title').count()['Book-Rating']
>= 50
```

Final Organization

- **User-book matrix** for recommendations
- **707 books** × **815 readers**
- **Missing values** filled with 0

```
pt =
final_ratings.pivot_table(index='Book-
Title', columns='User-ID',
values='Book-Rating')
```

Better results from quality data

The Bestseller Approach

How It Works

1 Count Ratings

Books with 250+ ratings

2 Calculate Average

Average rating per book

3 Filter & Sort

Highest average ratings

4 Return Top Books

Display top 50 books

Simple but effective for new users

Key Implementation

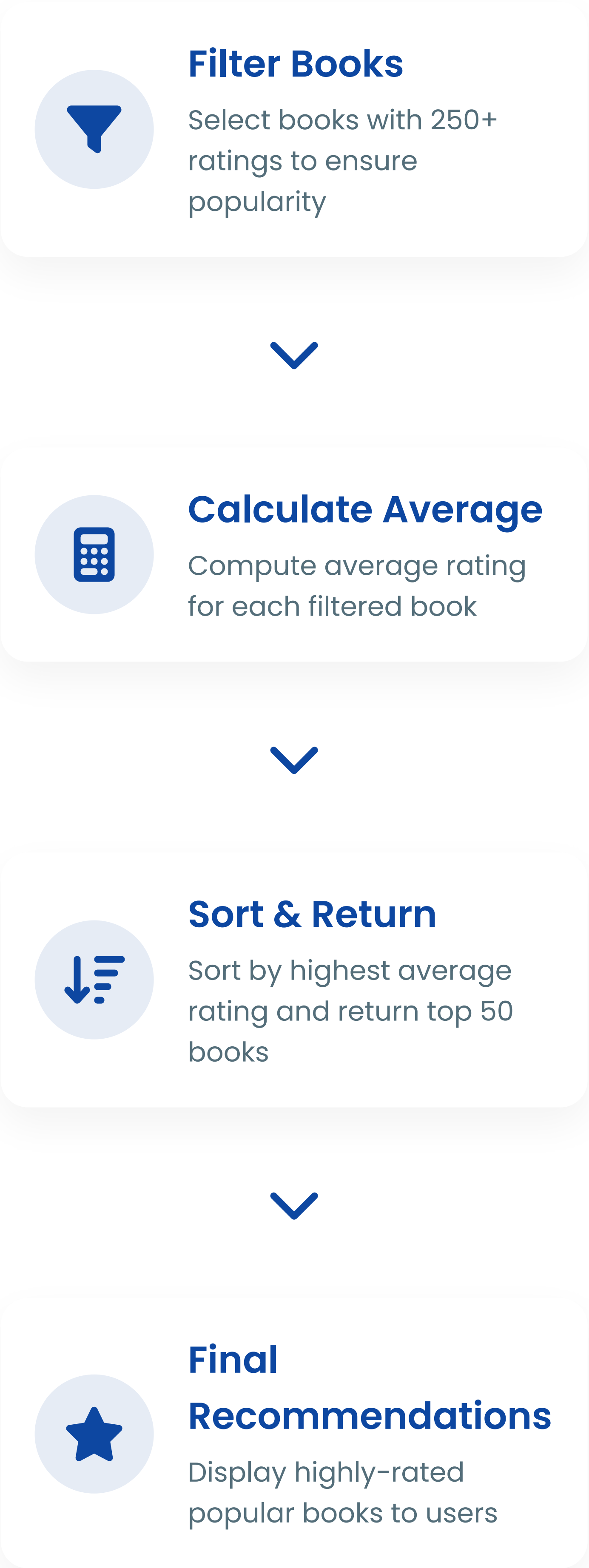
```
# Filter books with 250+ ratings
popular_df=popular_df[popular_df['num_ratings'] >= 250]
# Sort by highest average rating
popular_df=popular_df.sort_values('avg_rating',ascending=False)
# Get top 50 books
popular_df=popular_df.head(50)
```

Harry Potter

The Hobbit

1984

Bestseller Process Visualization



Filter Books

Select books with 250+ ratings to ensure popularity

Calculate Average

Compute average rating for each filtered book

Sort & Return

Sort by highest average rating and return top 50 books

Final Recommendations

Display highly-rated popular books to users

The Personal Touch

How It Works

1
Create Matrix
User-book connections (707×815)

2
Find Similarity
Compare reading patterns

3
Match Readers
Find similar taste profiles

4
Recommend
Suggest books they loved

Like having a well-read friend who knows your taste

Key Implementation

```
# Calculate similarity between books
fromsklearn.metrics.pairwiseimportcosine_similarity
similarity_score= cosine_similarity(pt)
# Recommendation function
defrecommend(book_name):
index= np.where(pt.index ==book_name)[0][0]
similar_items=                          similarity_score[index])))
            sorted(list(enumerate(
```

1984

Animal Farm

Brave New World

Personalized Recommendation Process

Create Reading Matrix

Map connections between 707 books and 815 readers

Find Similar Readers

Identify people with matching reading preferences

Discover Hidden Gems

Find books they loved that you haven't tried yet

Personalized Picks

Receive recommendations tailored to your unique taste

Two Ways to Find Your Next Read

Trending Books

Great for discovering popular titles

Harry Potter and the Prisoner of Azkaban 5.85
J.K. Rowling

The Hobbit 5.01
J.R.R. Tolkien

To Kill a Mockingbird 4.70
Harper Lee

The Da Vinci Code 4.64
Dan Brown

Perfect for new readers or exploring new genres

Personal Picks

Tailored to your unique reading taste

1984 → Animal Farm
George Orwell

The Hobbit → The Two Towers
J.R.R. Tolkien

Harry Potter → Chamber of Secrets
J.K. Rowling

The Da Vinci Code → Angels & Demons
Dan Brown

★ Ideal when you want something just for you

Real Example

If you liked Harry Potter →

The Chronicles of Narnia

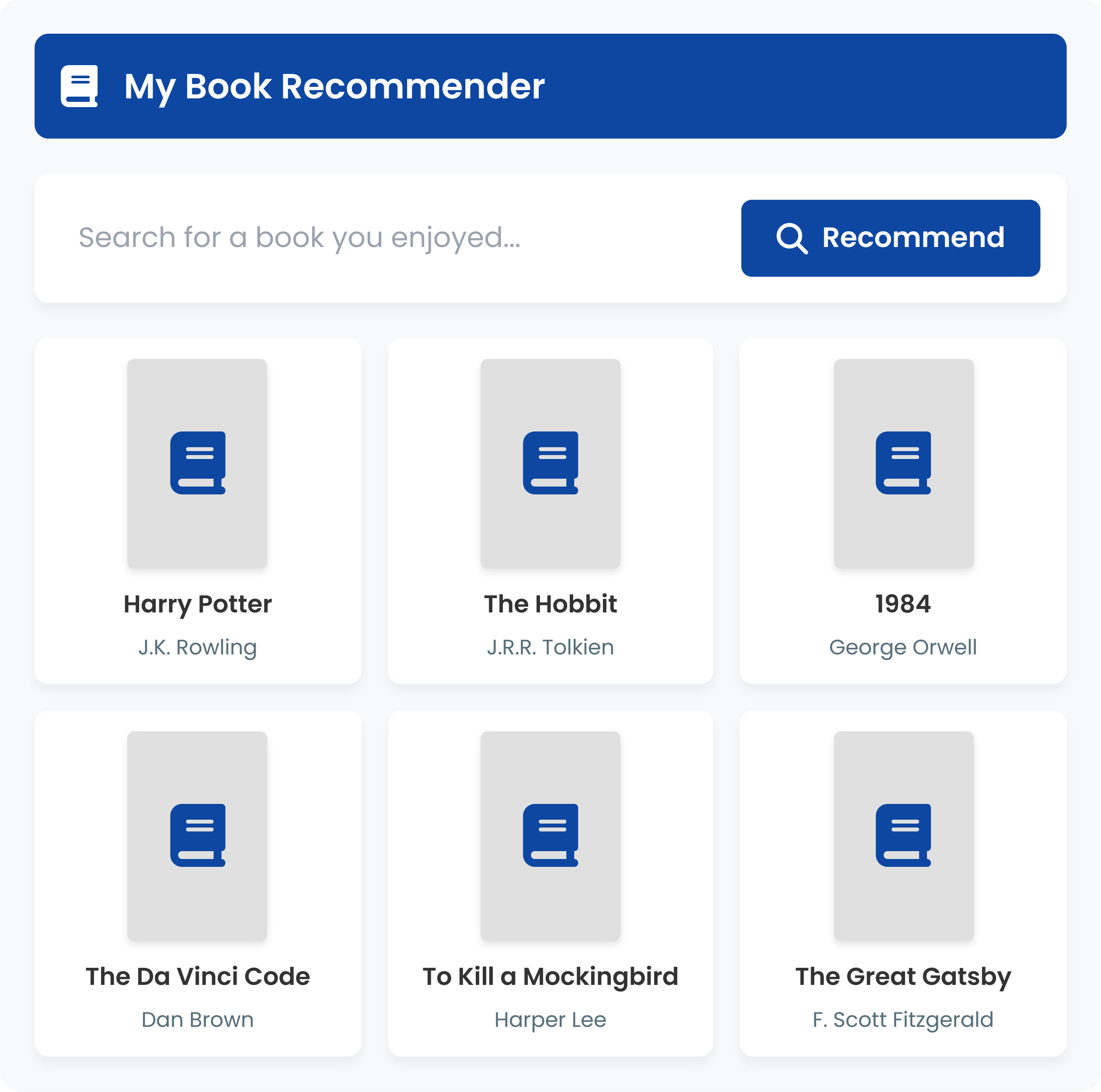
Percy Jackson

The Hobbit

Artemis Fowl

Try It Yourself

App Interface



My Book Recommender

Search for a book you enjoyed...

Recommend

Harry Potter J.K. Rowling	The Hobbit J.R.R. Tolkien	1984 George Orwell
The Da Vinci Code Dan Brown	To Kill a Mockingbird Harper Lee	The Great Gatsby F. Scott Fitzgerald

Key Features

Easy Search

Type a book title to get recommendations

Rich Display

See book covers and author information

Dual Approach

Both popular and personalized recommendations

Available Everywhere

Phone

Tablet

Computer

What's Next

What We Accomplished

- Two recommendation systems
- Personalized suggestions
- Trending book discovery

Real-World Impact

- Save time searching
- More time reading
- Better reading experiences

Future Improvements

1. **Enhanced Book Details**
   Add descriptions, genres, and themes
2. **Hybrid Recommendation System**
   Combine both approaches for better results
3. **User Profiles & History**
   Track reading preferences over time
4. **Advanced Algorithms**
   Implement deep learning models

Try our recommendation system and discover your next favorite book!