



# Book Club Dashboard

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Team 8

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# Background and Motivation

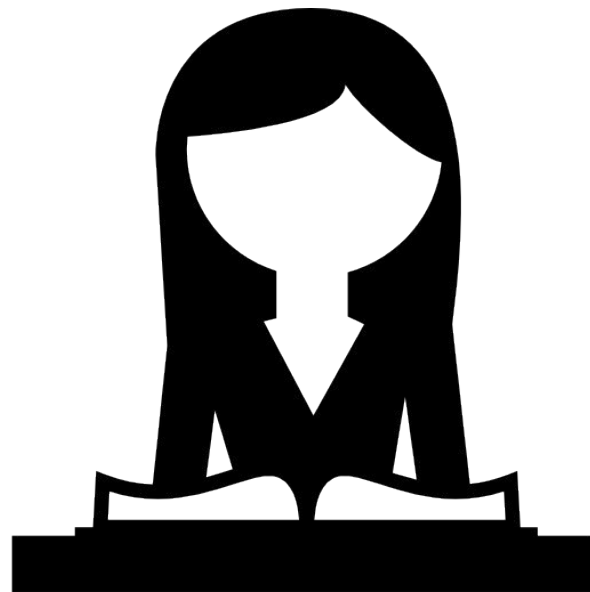
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- Target Demographic -- Book Enthusiasts
- Finding new books to read is challenging task
- No popular book analyzing and recommendation platform

# User Story

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- Jane just finished reading Da Vinci Code and is looking for a similar book to read
- She was thinking about buying Schindler's List but wants more information the book
- Jane wants to know which genre is the most popular



Book Enthusiast Jane

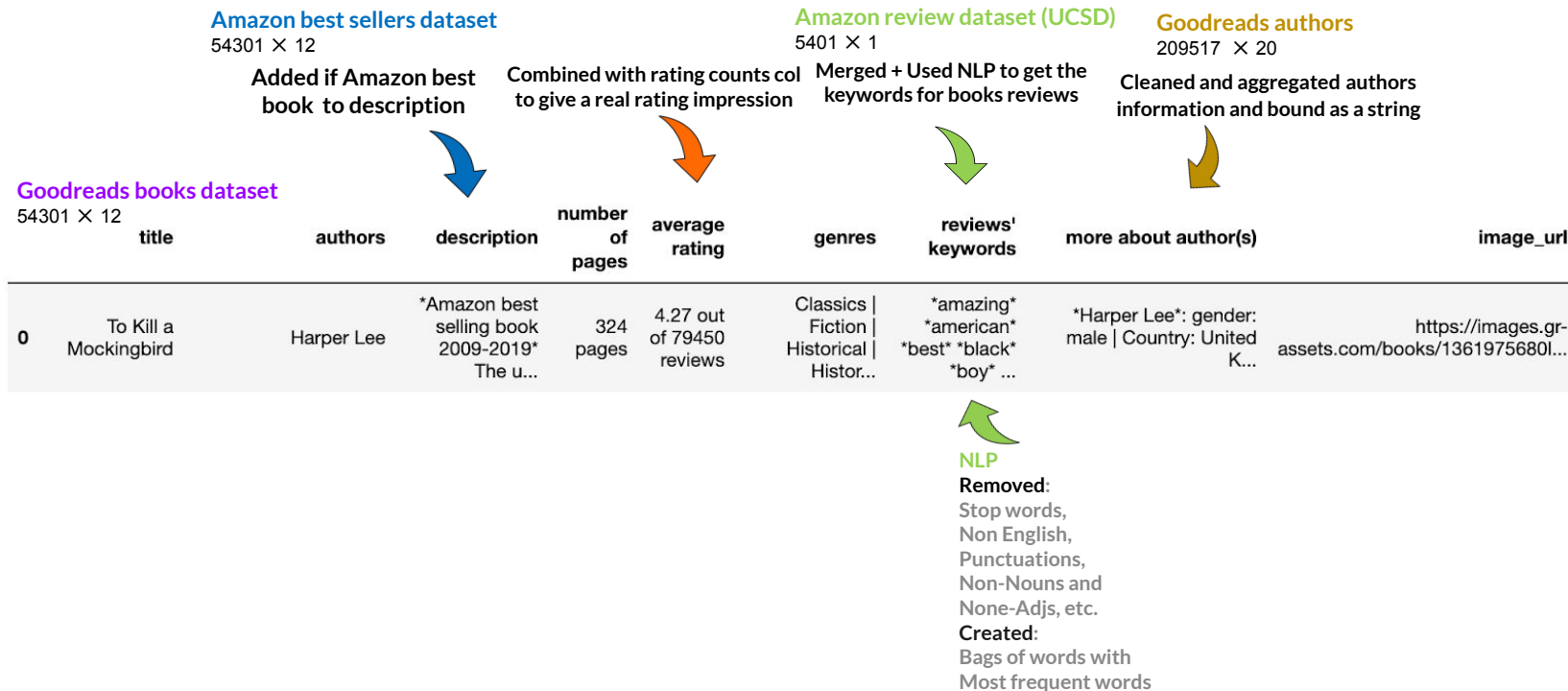
# Goals

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- Dashboard should be intuitive to use
- Books should be easy to look up
- Information should not be cluttered
- Informative



# Data Preprocessing



# Tabs Overview

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- Data Exploration
  - Genre Distribution for Different Countries
  - Data Exploration Based on Genres
- Book Search Engine
- Book Recommendation Engine

Genres Distribution for Different Countries

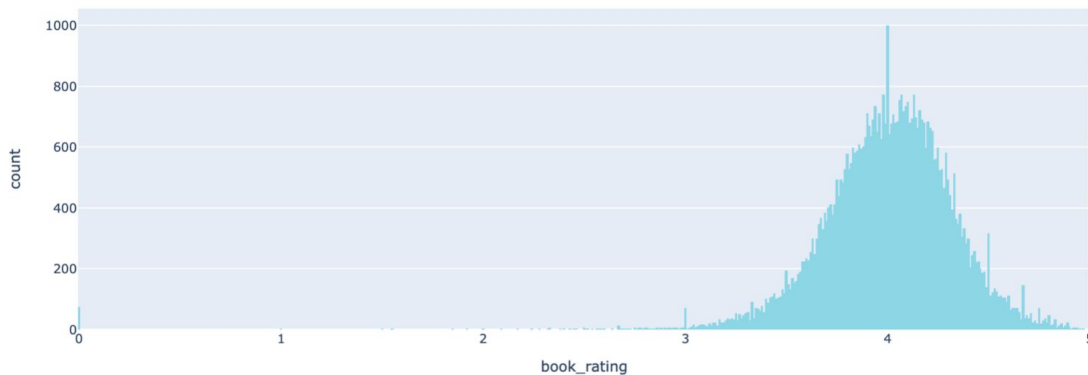
Data Exploration Based on Genres

Search Engine

Make a Recommendation

# Deep Dive -- Data Exploration

Histogram of Attributes



Select an Attribute:

Book rating

**Book rating**

Book rating count

Book review count

Book pages

Book format

Amazon recommended

# Deep Dive -- Data Exploration

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Select an Genre:

All

Young Adult

Fiction

Science

Dystopia

Fantasy

Percent of Data to Display:

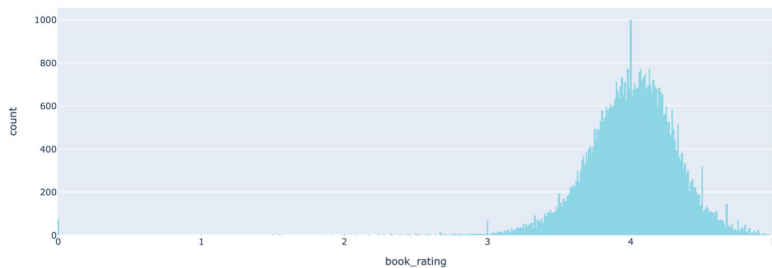




# Deep Dive -- Data Exploration

- Attributes Distribution based on different genres.
- Genres distribution based on different countries

Histogram of Attributes



Select an Attribute:

Book rating

Book rating

Book rating count

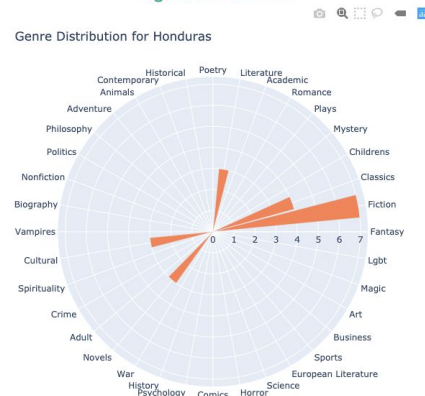
Book review count

Book pages

Book format

Amazon recommended

Figure for Genres



Select an Country:

Honduras

Guinea

Guinea-Bissau

Guyana

Haiti

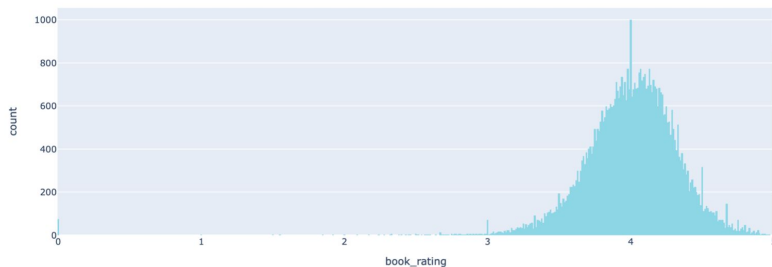
Heard Island and McDonald Islands

Honduras

# Deep Dive -- Data Exploration

- Attributes Distribution based on different genres.
- Genres distribution based on different countries

Histogram of Attributes



Select an Attribute:

Book rating

Book rating

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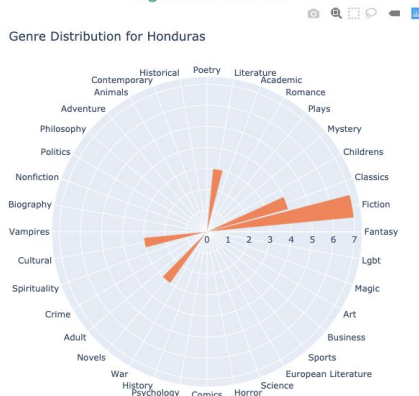
Book review count

Book pages

Book format

Amazon recommended

Figure for Genres



Select an Country:

Honduras

Guinea

Guinea-Bissau

Guyana

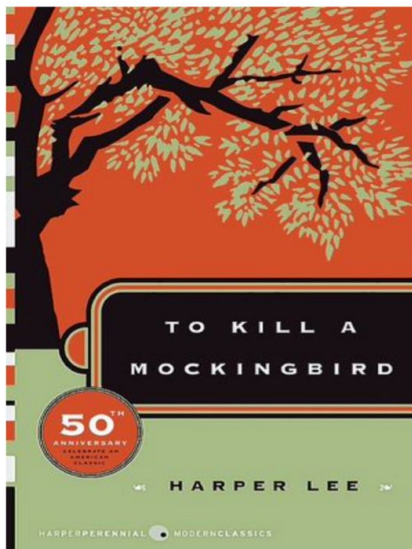
Haiti

Heard Island and McDonald Islands

Honduras

# Deep Dive -- Book Search Engine

To Kill a Mockingbird

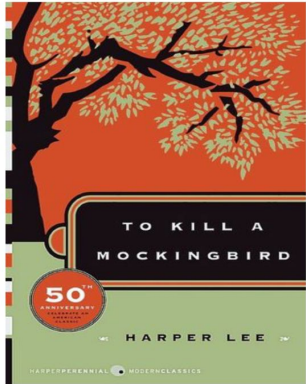


<b>Title:</b>	To Kill a Mockingbird
<b>Author(s):</b>	Harper Lee
<b>Average rating:</b>	4.27 out of 79450 reviews
<b>Genres:</b>	Classics   Fiction   Historical   Historical Fiction   Academic   School
<b>Number of Pages:</b>	324 pages
<b>Keywords from review(s):</b>	*amazing* *american* *best* *black* *boy* *deep* *excellent* *full* *great* *greatest* *helpful* *high* *human* *interesting* *main* *novel* *old* *personal* *possible* *powerful* *small* *strong* *unique* *young*
<b>More information about the Author(s):</b>	*Harper Lee*: gender: male   Country: United Kingdom   average ratings of 2 works: 3.74
<b>Description:</b>	*Amazon best selling book 2009-2019* The unforgettable novel of a childhood in a sleepy Southern town and the crisis of conscience that rocked it, To Kill A Mockingbird became both an instant bestseller and a critical success when it was first published in 1960. It went on to win the Pulitzer Prize in 1961 and was later made into an Academy Award-winning film, also a classic. Compassionate, dramatic, and deeply moving, To Kill A Mockingbird takes readers to the roots of human behavior - to innocence and experience, kindness and cruelty, love and hatred, humor and pathos. Now with over 18 million copies in print and translated into forty languages, this regional story by a young Alabama woman claims universal appeal. Harper Lee always considered her book to be a simple love story. Today it is regarded as a masterpiece of American literature.

# Deep Dive -- Book Search Engine

- Comprehensive search results with details about books
- Users can search their desired books even if they cannot remember their whole name

✕ ▼



**Title:** To Kill a Mockingbird

**Author(s):** Harper Lee

**Average rating:** 4.27 out of 79450 reviews

**Genres:** Classics | Fiction | Historical | Historical Fiction | Academic | School

**Number of Pages:** 324 pages

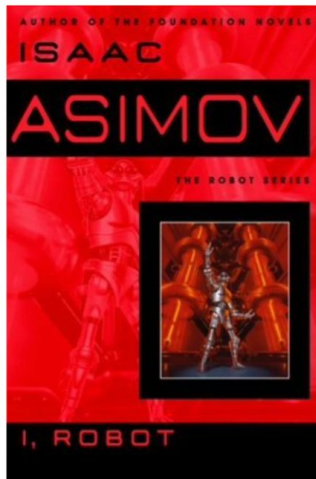
**Keywords from review(s):** \*amazing\* \*american\* \*best\* \*black\* \*boy\* \*deep\* \*excellent\* \*full\* \*great\* \*greatest\* \*helpful\* \*high\* \*human\* \*interesting\* \*main\* \*novel\* \*old\* \*personal\* \*possible\* \*powerful\* \*small\* \*strong\* \*unique\* \*young\*

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# Deep Dive -- Recommendation Engine

Harry Potter And The Prisoner Of Azkaban



**Top Recommendation** I, Robot

**Author** Isaac Asimov

**Description**

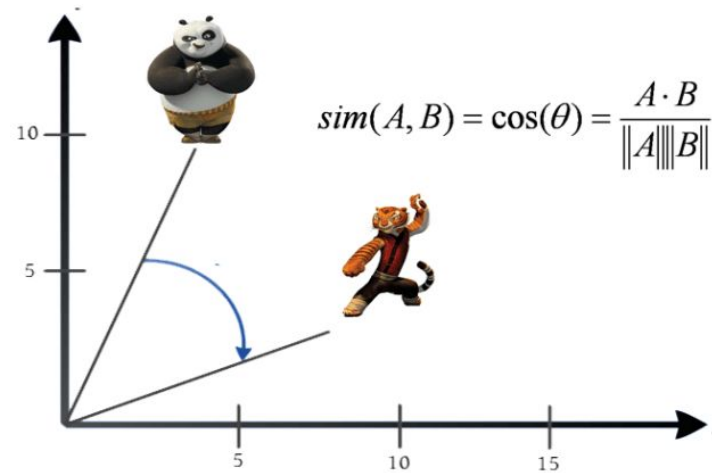
The three laws of robotics: 1) a robot may not injure a human being or, through inaction, allow a human being to come to harm. 2) a robot must obey orders given to it by human beings except where such orders would conflict with the first law. 3) a robot must protect its own existence as long as such protection does not conflict with the first or second law. With these three, simple directives, Isaac Asimov changed our perception of robots forever when he formulated the laws governing their behavior. In *I, Robot*, Asimov chronicles the development of the robot through a series of interlinked stories: from its primitive origins in the present to its ultimate perfection in the not-so-distant future—a future in which humanity itself may be rendered obsolete. Here are stories of robots gone mad, of mind-read robots, and robots with a sense of humor. Of robot politicians, and robots who secretly run the world—all told with the dramatic blend of science fact and science fiction that has become Asimov's trademark.

**Rating** 4.18

**Length** 224 pages.

# Deep Dive -- Book Search Engine

- Used Natural Language Processing to turn words into vectors
- Cosine similarity to match book descriptions
- Cosine score closest to 1 returned



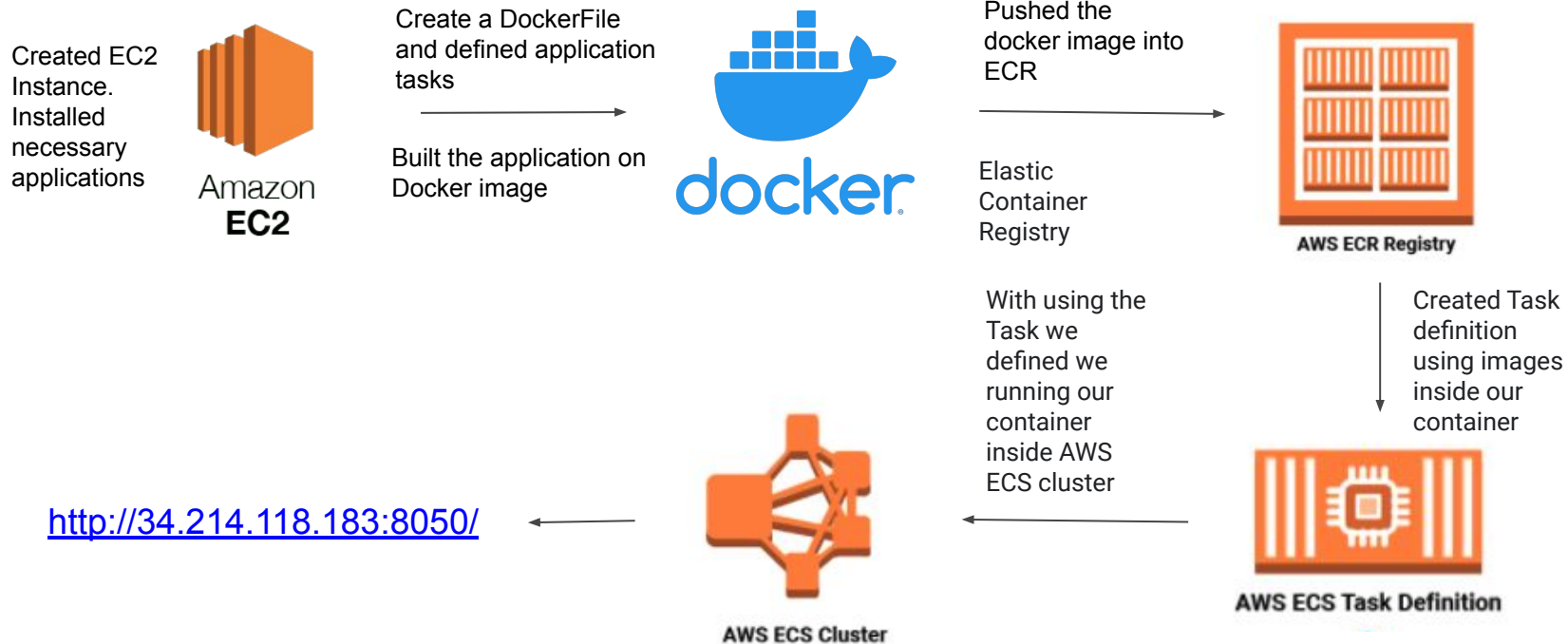
<https://towardsdatascience.com/3-basic-distance-measurement-in-text-mining-5852becff1d7>

# OKR Summary

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- We stuck to initially proposed timeline closely
- Group reassignments added a person -- restritributed workload
- Challenges
  - Integrating different datasets was messy
  - Working with Amazon reviews was a big file, limited computation

# AWS Deployment Architecture





# Demo



# Thank You!

