

BOOKS AND REVIEWS

SEARCH ENGINE

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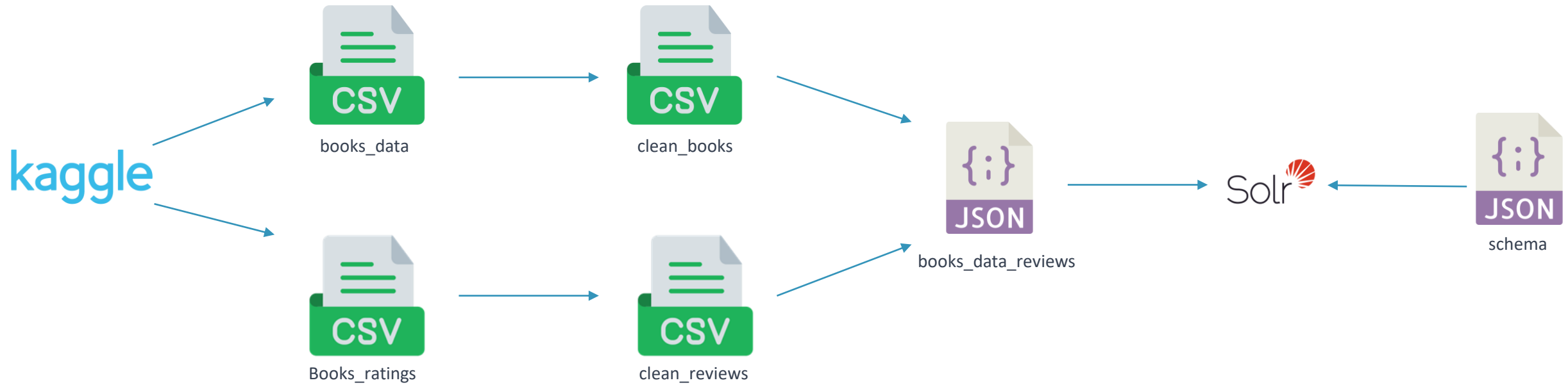
Project Overview

- The objective of our project is to provide the user with an advanced book search so that they can find the reading they are looking for based on several factors.



- Thus, the reader can base their search not only on the book category and author, but also on the topics it covers, reviews, ratings and many other topics.

Collections and Documents

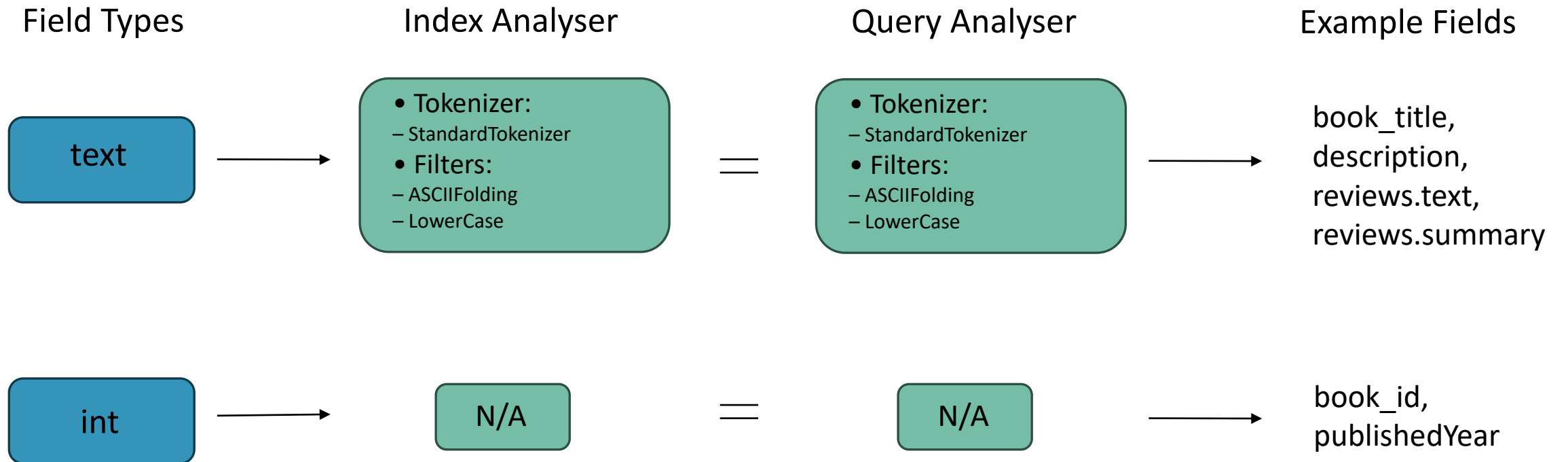


Collections and Documents

```
{
  "book_title": "Wonderful Worship in Smaller Churches",
  "description": "This resource includes twelve principles in understanding small church worship, fifteen practices for planning worship with fewer than",
  "authors": "David R. Ray",
  "publisher": null,
  "categories": "Religion",
  "publishedYear": 2000,
  "reviews": [
    {
      "summary": "Outstanding Resource for Small Church Pastors",
      "text": "I just finished the book, 'Wonderful Worship in Smaller Churches,' by David Ray, an outstanding resource for small church"
    },
    {
      "summary": "Small Churches CAN Have Wonderful Worship",
      "text": "Many small churches feel like they can not have great worship because they lack the resources that larger churches take for granted."
    },
    {
      "summary": "Not Just for Pastors!",
      "text": "I just finished reading this amazing book and came away with an entirely different perspective on our smaller congregation. As a mi"
    },
    {
      "summary": "Small church pastor? This is the book on worship",
      "text": "I hadn't been a small church pastor very long before I began to hear about David R. Ray. If you do any reading in this area, you'll"
    }
  ],
  "book_id": 3
}
```

books_data_reviews.json

Indexing Process



Information Needs

Queries|



- Retrieve books that talk about artificial intelligence.
- Retrieve books that support fights against racism.
- Retrieve novels set in post-apocalyptic worlds.
- Retrieve books related to American Civil War.

Books About AI

Base System

```
"""
q = artificial intelligence
q.op = or

defType = edismax
qf = book_title reviews.text reviews.summary description categories
"""
```

```
{
  "book_title": "Encyclopedia of Artificial Intelligence",
  "authors": ["Stuart C. Shapiro, Stuart Charles Shapiro"],
  "publisher": "John Wiley & Sons",
  "categories": ["Artificial intelligence"],
  "publishedYear": 1992,
  "reviews.summary": ["bad used bookseller", "Encyclopedia of Artificial Intelligence", "excellent"],
  "reviews.text": ["Hardcover: 1246 pages, May 2000(publishing year) in the page displayed. However, 1219 pages, 1987 in the book sent"],
  "book_id": 132306,
  "id": "12515b61-1758-4c46-9d46-355e7693038c",
  "_version_": 1782461345792262145
}, {
```

Enhanced System

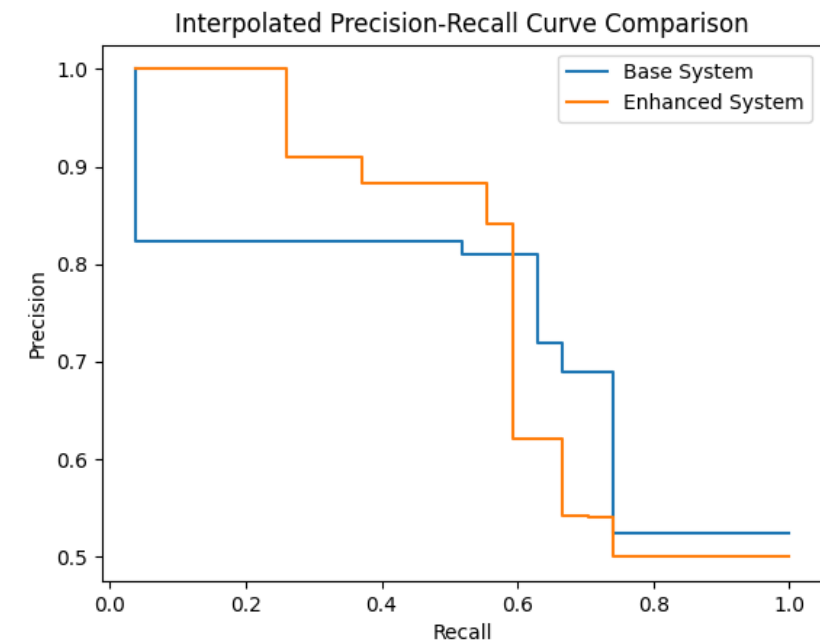
```
"""
q = artificial intelligence
q.op = or

defType = edismax
qf = book_title^2 reviews.text^2 reviews.summary description categories
"""
```

Books About AI

Evaluation

System	Average Precision	Precision at 10 (P@10)
Base System	0.759010	0.700000
Enhanced System	0.858932	0.900000



Books That Fight Against Racism

Base System

```
"""
q = fight fights against racism discrimination
q.op = or

defType = edismax
qf = book_title reviews.text reviews.summary description categories
"""
```

Enhanced System

```
"""
q = fight fights against racism discrimination
q.op = or

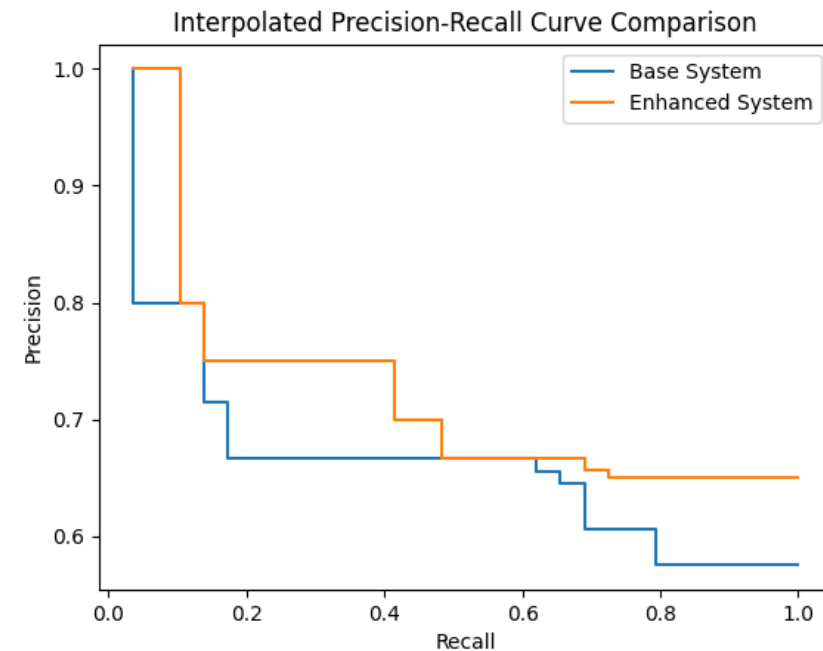
defType = edismax
qf = book_title^2 reviews.text^2 reviews.summary description categories
"""
```

```
{
  "book_title": "On black nationalism and self-determination",
  "publishedYear": 1970,
  "reviews.summary": ["Trotsky predicts role of Black worker", "Trotsky way ahead of his time on question of racism", "A Historical View of Ma"],
  "reviews.text": ["This book from the 1930s pierces right to the heart of American politics today. In these discussions with communists act"],
  "book_id": 167186,
  "id": "7d4ae439-468b-48e2-9b5d-385c9941be4c",
  "_version_": 1782461447027032064
}, {
```

Books That Fight Against Racism

Evaluation

System	Average Precision	Precision at 10 (P@10)
Base System	0.658527	0.600000
Enhanced System	0.707906	0.700000



Post-Apocalyptic World Novels

Base System

```
"""
q = novel AND post-apocalyptic
q.op = or

defType = edismax
qf = book_title reviews.text reviews.summary description categories
"""
```

Enhanced System

```
"""
q = novel AND post-apocalyptic
q.op = or

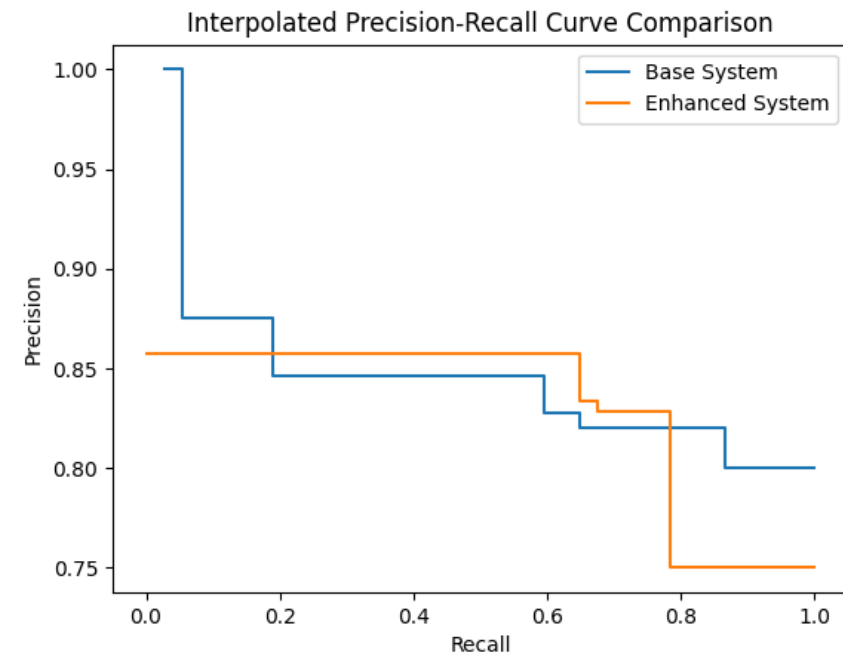
defType = edismax
qf = book_title^2 reviews.text^2 reviews.summary description categories
"""
```

```
{
  "book_title": "Snowfall (The Snowfall Trilogy, Book 1)",
  "description": "Snowfall features another sharp-tongued, uncompromising heroine, Catania Olsen. She is the doctor for and spiritua",
  "authors": ["Mitchell Smith"],
  "publisher": "Forge Books",
  "categories": ["Fiction"],
  "publishedYear": 2007,
  "reviews.summary": ["Post-Apocalyptic Sci-Fi (without the SCI)", "A SAVAGE SURVIVAL TALE", "Mankind in the next iceage", "great apoca",
  "reviews.text": ["I have mixed feelings about this novel. On one hand, it has a pretty neat premise: The impact of comet Shoemaker",
  "book_id": "59072",
  "id": "dc85ea1b-c779-4112-8f23-a3d59774a160",
  "_version_": 1782461123833888768
}, {
```

Post-Apocalyptic World Novels

Evaluation

System	Average Precision	Precision at 10 (P@10)
Base System	0.821265	0.700000
Enhanced System	0.759569	0.700000



American Civil War Books

Base System

```
"""
q = "american civil war"
q.op = or

defType = edismax
qf = book_title reviews.text reviews.summary description categories
"""
```

Enhanced System

```
"""
q = "american civil war"
q.op = or

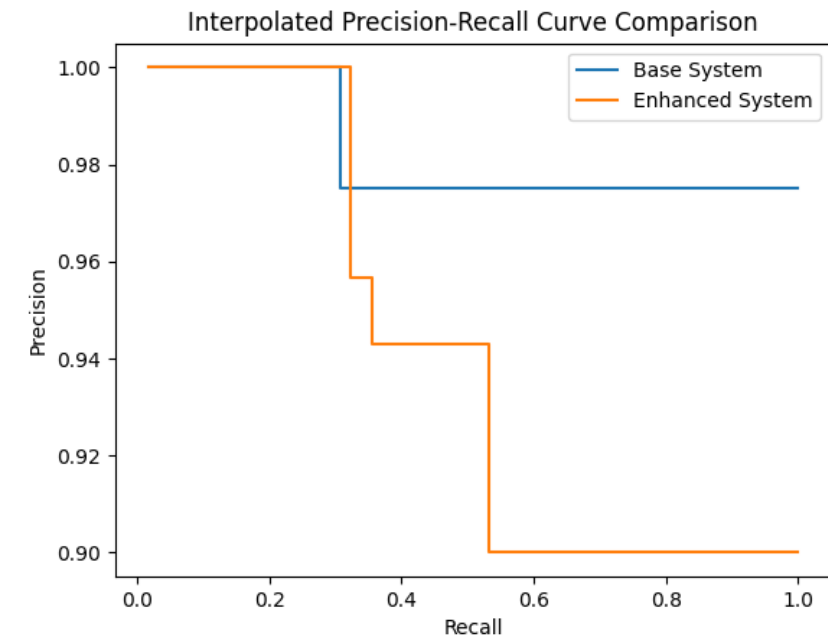
defType = edismax
qf = book_title^2 reviews.text^2 reviews.summary description categories
"""
```

```
{
  "book_title": "The Coming of the American Civil War (Problems in American Civilization)",
  "authors": ["Edwin Charles Rozwenc"],
  "publisher": "Boston : Heath",
  "categories": ["United States"],
  "publishedYear": 1961,
  "reviews.summary": ["The Coming of the American Civil War", "Intriguing"],
  "reviews.text": ["I use it for a text book for a class. The book is in good shape and was delivered quickly", "A compilation of very"],
  "book_id": 192780,
  "id": "d461d702-31ad-4f46-9862-bd1c8cf38468",
  "_version_": 1782461520961077251
}, {
```

American Civil War Books

Evaluation

System	Average Precision	Precision at 10 (P@10)
Base System	0.982544	1.000000
Enhanced System	0.968378	1.000000



Future Work

- The user must be able to find books through their author, category, theme, reviews and ratings, all combined.
- First, we need to implement the graphical interface and connect it with our matching engine.
- Then, we will need to add some filtering options.
- It would be useful to perform semantic search.

