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# *Book Discovery Chatbot*

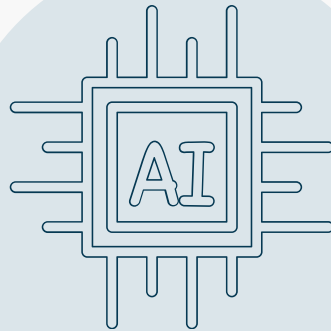
A Task-Oriented Dialog System Prototype

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# *Introduction & Motivation*

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## **Passion for Books Combined with Technology**

This project merges a deep love for literature with cutting-edge conversational AI, making book discovery both enjoyable and efficient.



## **Practical Utility for Avid Readers Seeking Quick Book Information**

The chatbot serves as a quick reference tool, providing readers with immediate access to book recommendations, synopses, and details without requiring extensive searches.



## **Real-world Data Integration for Dynamic, Reliable Responses**

By integrating with the Google Books and New York Times Books APIs, the chatbot delivers up-to-date and accurate information directly from trusted sources

# *Interaction Scenarios*



Searching for books with  
pagination



Retrieving book  
synopses



Fetching detailed book  
information



Listing current  
bestsellers



# Searching for Books

## Scenario Description:

- Users search for books by author, genre, or keyword.
- Supports pagination: users type "more books" to load additional results.

```
Your input -> Hi!
Greetings! How can I assist you with books today?
Your input -> Show me books in the romance genre
Here are some books I found:
- Pride and Prejudice
- Simple Gifts
- Pride and Prejudice
- Above and Beyond
- Last Sacrifice
Type 'more books' if you'd like to see additional results.
Your input -> more books
Here are some books I found:
- Sons and Lovers by David Herbert Lawrence
- The Italian Girl by Lucinda Riley
- The Missing Sister by Lucinda Riley
- A Loving Scoundrel by Johanna Lindsey
- Love Only Once by Johanna Lindsey
Type 'more books' if you'd like more results.
Do you need any further help with books?
```

```
Your input -> hello
Hi! I'm here to help you discover books, reviews, and more. What
Your input -> Can you recommend books by Agatha Christie?
Here are some books I found:
- Best Detective Stories of Agatha Christie
- The Agatha Christie Collection
- Agatha Christie Detectives
- Agatha Christie
- And Then There Were None
Type 'more books' if you'd like to see additional results.
Your input -> more books
Here are some books I found:
- The Agatha Christie Mystery by Derrick Murdoch
- Agatha Christie by Vanessa Wagstaff, Stephen Poole
- The Agatha Christie Collection by Agatha Christie
- The Life and Crimes of Agatha Christie by Charles Osborne
- The Bloomsbury Handbook to Agatha Christie by Mary Anna Evans,
Type 'more books' if you'd like more results.
Do you need any further help with books?
```

# Retrieving Book Synopsis

## Scenario Description:

Users request a synopsis of a specific book.

```
Do you need any further help with books?  
Your input -> Tell me what Sons and Lovers by David Herbert Lawrence is about  
Synopsis of *Tell me what Sons and Lovers by David Herbert Lawrence is about*:  
This semi-autobiographical novel explores the emotional conflicts through the protagonist, Paul Morel, and the suffocating relationships with a demanding mother and two very different love  
rs.  
Do you need any further help with books?
```

# Fetching Book Details

## Scenario Description:

Users ask for detailed information about a book.

```
Your input -> I'd like full info on Sons and Lovers by David Herbert Lawrence  
📖 *Title*: D.H. Lawrence's Son and Lovers: A Critique  
✍️ *Author(s)*: D.S. Dalal  
🏢 *Publisher*: Sarup & Sons  
📅 *Published Date*: 2007-10  
🔗 *More Info*: [Click here](http://books.google.gr/books?id=7T-06uA5C4cC&dq=like+full+info+on+Sons+and+Lovers+by+David+Herbert+Lawrence&hl=&source=gbs_api)  
Do you need any further help with books?
```

# Listing Current Bestsellers

## Scenario Description:

Users inquire about trending books.

```
Your input -> Show me the bestseller list
Here are the current bestsellers in hardcover fiction:
📖 Title: IRON FLAME
✍️ Author: Rebecca Yarros
💡 Description: The second book in the Empyrean series. Violet Sorrengail's next round of training under the new vice commandant might require her to betray the man she loves.
🔗 Buy here: https://www.amazon.com/dp/1649374178?tag=thenewyorktim-20
📖 Title: JAMES
✍️ Author: Percival Everett
💡 Description: A reimaging of "Adventures of Huckleberry Finn" shines a different light on Mark Twain's classic, revealing new facets of the character of Jim.
🔗 Buy here: https://www.amazon.com/dp/0385550367?tag=thenewyorktim-20
📖 Title: THE WOMEN
✍️ Author: Kristin Hannah
💡 Description: In 1965, a nursing student follows her brother to serve during the Vietnam War and returns to a divided America.
🔗 Buy here: https://www.amazon.com/dp/1250178630?tag=thenewyorktim-20
📖 Title: FOUR RUINED REALMS
✍️ Author: Mai Corland
💡 Description: The second book in the Broken Blades series. Trust is tested in the pursuit of the Golden Ring of the Dragon Lord.
🔗 Buy here: https://www.amazon.com/dp/1649377509?tag=thenewyorktim-20
📖 Title: NEVER SAY NEVER
✍️ Author: Danielle Steel
💡 Description: A woman reeling from her husband's infidelity and the loss of her job meets a well-known actor in the French countryside.
🔗 Buy here: https://www.amazon.com/dp/059349864X?tag=thenewyorktim-20
📖 Title: THE GOD OF THE WOODS
✍️ Author: Liz Moore
💡 Description: When a 13-year-old girl disappears from an Adirondack summer camp in 1975, secrets kept by the Van Laar family emerge.
🔗 Buy here: https://www.amazon.com/dp/0593418913?tag=thenewyorktim-20
📖 Title: HOLMES IS MISSING
✍️ Author: James Patterson and Brian Sitts
💡 Description: The second book in the Holmes, Margaret & Poe series. A series of child abductions perplexes the private investigators.
🔗 Buy here: https://www.amazon.com/dp/0316569976?tag=thenewyorktim-20
Do you need any further help with books?
```



# Real-world Data Integrations

## {🔗} Developers

### Get Started

#### Create an Account

If you don't already have an account create one:

1. Click **Sign In**.
2. Click **Create account** and follow prompts to register.

#### Sign In

To sign in to the portal:

1. Click **Sign In**.
2. Enter your email address and password.
3. Click **Sign In**.

#### Register apps

To register an app:

1. Select **My Apps** from the user drop-down.
2. Click + **New App** to create a new app.
3. Enter a name and description for the app in the New App dialog.
4. Click **Create**.
5. Click the **APIs** tab.

- Google Books API:

**Purpose:** Search, synopsis, details.

**Integration:** Custom actions calling the API.

**Rationale:** Comprehensive, up-to-date book data.

- New York Times Books API:

**Purpose:** Retrieve bestseller lists.

**Integration:** Dedicated action formatting bestseller data.

**Rationale:** Reliable, curated recommendations.

# *Insights and Observations*



## Dialogue Policy Experimentation

Adjusted fallback thresholds and  
history parameters.  
Observed improvements in  
conversation flow and accuracy.

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## General Insights

- Users received clearer clarifications when the bot was uncertain.
  - Improved handling of multi-turn dialogues and context preservation.
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# *Limitations and Future Improvements*

## Limitations:

- Challenges in handling very specific or obscure queries.
- Potential inaccuracies in data if APIs change their response formats.
- Dependency on external APIs and network connectivity.

## Future Improvements:

- Personalized book recommendations using user preferences.
- Enhanced error handling and retry strategies.
- Integration of more data sources (e.g., user reviews, ratings).
- Improved sentiment analysis and natural language understanding.





*Thank you*

