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Value Estimation Model with learning Book Condition's Image Data

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Abstract—Currently, the number of readers is rapidly decreasing, and with so many books published, it is difficult for readers to find the books they want. To solve this problem, generative AI book recommendation proposes a customized book recommendation AI suitable for busy modern people. The service aims to solve various inconveniences that readers experience in the process of finding and reading books. First, in cases where readers only remember a brief synopsis and cannot recall the title of the book, a service is provided to help them easily find the book they want. Second, to simplify the complicated process of purchasing or borrowing books, a service is provided to provide the status of books in bookstores or libraries. Through this AI book recommendation service, we expect to improve the accessibility and literacy of modern people to read, and to improve the quality of human life and a life that can be observed.

Keywords—Books, generative AI, book recommendations, AI services, AI librarians

I. INTRODUCTION

Reading has a positive impact on our lives in various ways. It improves various cognitive abilities such as language development, thinking skills, and creativity, thereby developing intellectual ability. It also helps relieve stress and psychological stability, thereby improving mental health. In addition, reading books allows us to discover our own tastes and values. Through books, we can encounter various perspectives and experiences, which can strengthen social bonds. Reading is not just a hobby, but an important channel for self-discovery and development. In addition, if the lack of reading continues, it can have various negative effects on individual growth and society as a whole, such as decreased academic achievement, widening educational gap, and stagnation of reading culture. All members of society, including individuals, families, schools, and the government, need to work together to promote reading culture. In order to increase the number of readers, we will develop a website that allows users to easily search and read the books they want, and where they can input information about the books they remember, the plot they vaguely remember, and the names of supporting characters. The website searches for books through generative AI and provides users with the most similar books. The searched books are displayed to users along with information such as the title, author, and publisher. Users can click on the books to view detailed information. In addition, it provides information on finding the book at a nearby bookstore or library. It helps readers find books they have forgotten, thereby enriching their reading experience. It provides a way to purchase or rent books for the convenience of users, making the process of enjoying reading more

convenient. It induces conversations and sharing about books among users, thereby activating the reading community. Chapter 2 discusses websites where books can be purchased and read, Chapter 3 discusses the generative AI recommendation mechanism, Chapter 4 discusses design and implementation, and Chapter 5 discusses the conclusion.

II. RELATED WORK

There are various ways to find the book you want. Aladdin Used Bookstore is a representative example. You can search for the book you want at 'Aladdin Used Bookstore,' one of the specialized used book trading platforms [1]. Another way is to search for book materials at public libraries in the area, such as the Gyeonggi Cyber Library.

III. GENERATIVE AI BOOK RECOMMENDATION MECHANISM

The proposed generative AI book recommendation mechanism is a Bookbot that tells you the title of the book based on its content or characters and recommends books in the category you want, and a BOOK MAP service that lets you see the number of books in stock in offline stores at a glance on a map and find the location of offline stores by entering the title of the book on the map. There are two main functions: a chatbot that recommends book content and detailed information using generative AI GPT-4-turbo, a book information API using Kakao Search API, and a book information search function that can search for book information and check inventory through the inventory DB [3].

IV. DESIGN AND IMPLEMENTATION

This is the overall design flow diagram for a generative AI-based web. The flowchart of the overall design of the generative AI-based web is as follows(Figure 1). When you click the Bookbot banner on the website, a Bookbot appears that asks questions to the AI librarian, and the AI librarian outputs book information. When you click the check book inventory button, a list of the titles of the books you asked about is output, and when you click on a book, you can see detailed information about the book and the number of books in stock. When you click the search for book inventory on the website, a map of your current location and the locations of nearby bookstores and libraries is displayed, and you can search for the book title. After searching, a list of books is output, and when you click on the book you want, you can see detailed information about the book and the number of books in stock. When you click on the search for book title on the banner that appears after clicking on the book transaction on the website, the book title search page appears, and you can output a list of books just like when you search for book inventory. When you click on the book you want, you can see

detailed information about the book and the number of books in stock.

When you click on the search for book inventory on the main page, you will be taken to the inventory check page, and when you click on the banner for the book bot that says “Search for the book I want,” you will be taken to the Book

This page is the page that appears when you click the Search Book Inventory button on the main page or the Check Book Inventory button on the results screen page of Bookbot. On the right map, you can see your current location and check the locations of bookstores and libraries nearby. On the left is a box where you can search for book titles. If you search for a

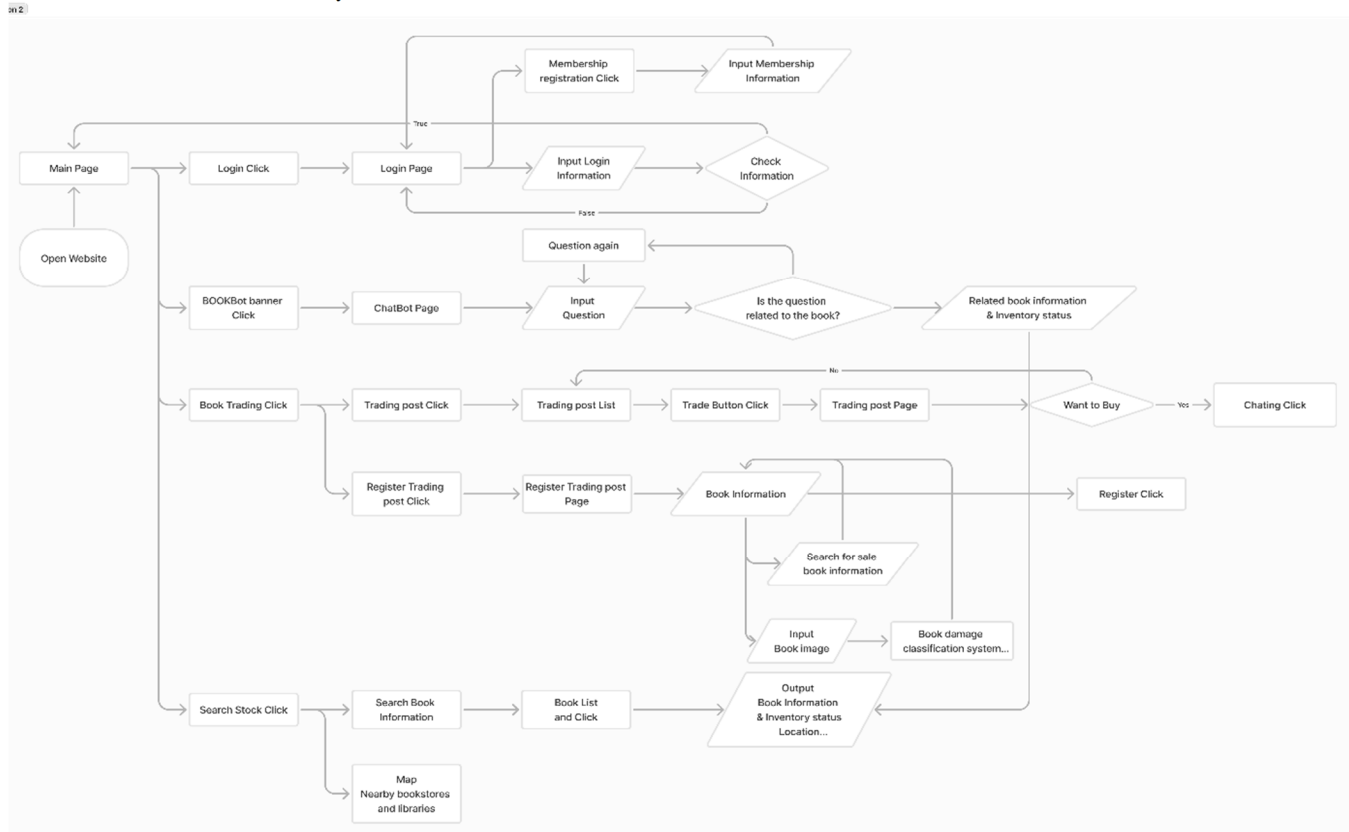


Fig 1. Workflow

Bot. Figure 2 is the Bookbot page. On the Bookbot page, in the input field that says “Ask the AI librarian!”, you enter the book content, characters, and books you want to be recommended. When you click on the book transaction, a banner for searching the book title will appear, and when you click on it, you will be taken to the book title search page. Information on books that match the information you entered will be provided, and at the bottom, an image of the book and detailed information will be provided.

title in the title search box, a list of books will appear, and clicking on a book on the list will display detailed information and inventory count. The map displays markers where books are in stock. Clicking on a book will display a banner with detailed book information and inventory count at the bookstore, allowing you to see the status of the book at a glance. Figure 3 is the Bookbot execution page.

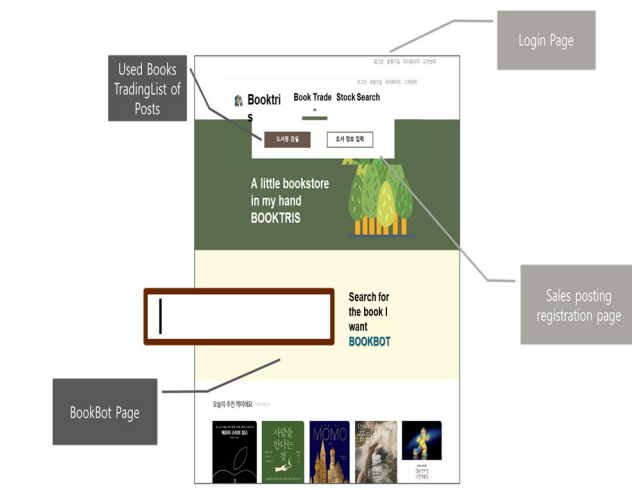


Fig. 2. BOOKbot Main Page.



Fig. 3. ChatBot Page

Figure 4 is a bookstore/library map page.

V. CONCLUSION

Currently, the number of readers is rapidly decreasing, and with so many books published, it is difficult for readers to find and read the books they want. To solve this problem, generative AI book recommendation proposes a customized book recommendation AI suitable for busy modern people. The service aims to solve various inconveniences that readers experience in the process of finding and reading books.

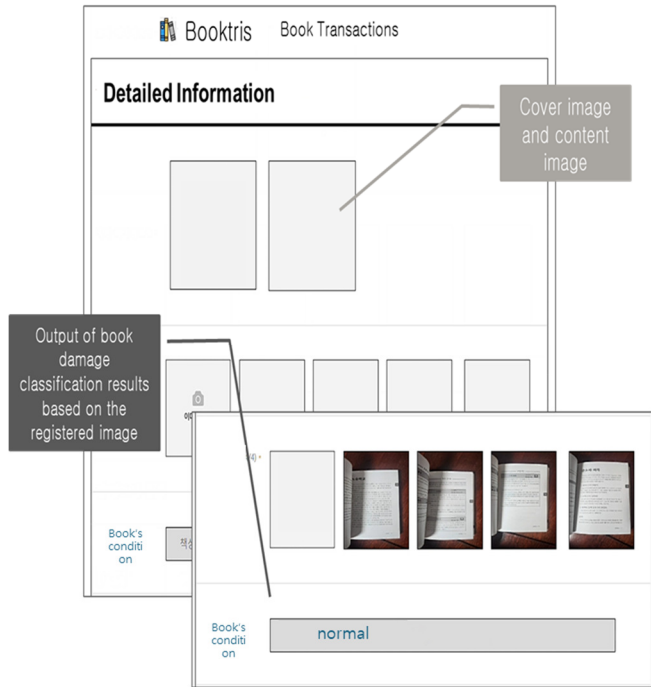


Fig. 4. Book Registration Page

The picture adds a feature that allows users to trade used items. We use Aura/Lava-based image learning to classify the damage of books into best/high/medium/low. This allows you to set the price of your book. In other words, through the AI book recommendation service, we expect to improve the reading accessibility and literacy of modern people and to create a quality of human life and a life that can be observed.

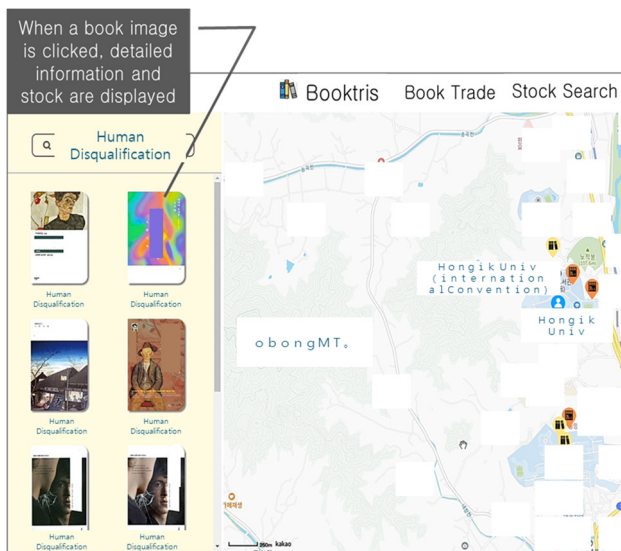


Fig. 5. Closed Book Map

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