UNIVERSITI TEKNOLOGI MARA

BOOK RECOMMENDATION SYSTEM USING CONTENT-BASED FILTERING

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ABSTRACT

In the modern world, where individuals may enter a library or browse online platforms without a specific book in mind. However, every reader has their own unique interests and preferences. With the help of Book Recommendation System, we can offer a solution by utilizing algorithms to suggest books based on a reader's interests. With the aim of reducing the need to search for books and providing personalized recommendations, we propose the development of a website for students, designed to simplify the book selection process and eliminate confusion. By leveraging a user's previous checkout history and search data, the website can recommend books based on the user's interests. There are several models available for building such a system, using Content-based recommendation. However, most machine learning-based techniques rely on manually produced features derived from the input textual content. The models' performance was evaluated using a confusion matrix, where the accuracy, TF-IDF, cosine similarity, mean average precision were calculated. The highest accuracy obtained for the model is 82%. Overall, all objectives in this project are achieved successfully. However, there are also so limitations that needed improvement in the future. The major limitation is the algorithm running speed which can be a little slow when it comes to making recommendations. This is attributed to the intricacy of the content-based filtering algorithm, necessitating a substantial computational load on the central processing unit of a computer. In the future, the project can include the ability to explore multi-modal recommendation systems that consider not only textual information but also cover images, author details, and other relevant features to provide a more holistic understanding of user preferences.

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