Design And Development Of Manga Mobile Application Recommender System

Abdulrazak Yahya Saleh
FSKPM Faculty
Universiti Malaysia Sarawak (UNIMAS)
Kota Samarahan, Sarawak, Malaysia
ysahabdulrazak@unimas.my

Nurul Syafiqah Hailmi
FSKPM Faculty
Universiti Malaysia Sarawak (UNIMAS)
Kota Samarahan, Sarawak, Malaysia
71234@siswa.unimas.my

***Abstract*— Reading an e-book has become common in modern society due to its convenience. Manga, another sort of e-book, has developed a devoted following over the years. As a result, when selling products online, most businesses have a recommendation system in place. The majority of websites, however, are not made with the customer in mind; rather, the corporations' force add-ons sell to clients by making recommendations. As a result, our research primarily focused on a machine learning strategy known as a clustering-based method to address this constraint. The user's preferences have been taken into account by the clustering-based method. The agile methodology has been used in our study. A mobile application has been used to assess how effective this strategy is. Following evaluation, the utility of the system is assessed at 85.71 percent, followed by satisfaction at 93.20 percent, ease of use at 88.53 percent, ease of learning at 95.83 percent, and usefulness at 85.71 percent. Overall, the system performed well in the usability assessment with a score of 85.08 percent.**

Keywords*— *Recommendation system, mobile application, manga, user testing

I. INTRODUCTION

Online customers now face enormous trouble selecting appropriate books from an endless e-book area due to the COVID-19 epidemic's dramatic increase in the number of online books [1]. Most businesses use a recommendation system when selling products online [2-4]. However, practically all websites do not prioritise the needs of the client; instead, the companies' forced add-on sells to customers by promoting unnecessary and irrelevant items [5]. A personalised recommendation system (PRS) can be used by individual customers to find interesting and practical products among a wide range of possibilities [6]. Because of the growth of the internet, consumers now have a huge range of e-commerce products to choose from [5].

Fig 1. Book rating data set by Book-Crossings [7]

Using a recommendation system, users can find everything online. As seen in Figure 1, new books have been suggested based on how closely they resemble the item that was purchased. On the other side, e-marketplaces and e-libraries have grown to be well-liked gathering spaces. Thanks to e-book reading platforms and online shopping habits, users found their favourite books among a variety of products. Expert systems thus enable users to select from a wide range of options quickly and intelligently. As a result, recommendation algorithms were developed to link users' searches and provide the best results out of a wide range of options. This study primarily used a machine learning strategy known as a clustering-based method to overcome this constraint.

The content-based approach disregards customer preferences in favor of making recommendations based on item commonalities. By incorporating user preferences into the selected approach, the clustering-based method benefits from this constraint in the given situation. On the other hand, by using a clustering-based approach, a high level of accuracy can be achieved. This is because collaborative filtering is inaccurate when applied to small data sets. Using clustering, all of the books can be arranged depending on user reviews and preferences. Such clustering exhibits outstanding prediction capabilities for a recommendation system.

Designing a manga recommendation system for mobile applications is the goal of this study. Another goal is to evaluate how well the manga recommender system matched user preferences during usability testing.

Following this introduction, the remainder of the paper is structured as follows: the second section gives an overview of the related work and techniques used; the third section discusses methodologies; the proposed work and its outcomes with implementation steps are covered in the fourth section; and finally, the proposed work is wrapped up in the final section.

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