

INFORMATICS INSTITUTE OF TECHNOLOGY

In Collaboration with

UNIVERSITY OF WESTMINSTER

BookXchange: Book exchange system with an Effective Recommendation engine.

A dissertation by

Miss. Fazna Fouseen

Supervised by Mr. Achala Aponso

Submitted in partial fulfilment of the requirements for the BEng. Software Engineering degree at the University of Westminster.

 $March\ 20^{th}\ 2022$

Abstract

Individuals can use an item-to-item exchange approach to trade products they own and keep the items they need, for example keeping cash on hand for needs that can't be covered by exchanging, such as a mortgage, medical expenses, or utilities. When two or more people have items that the other desires, they can calculate the value of the items and provide the items that result in the best resource allocation. Manually searching for probable exchange partners is neither efficient nor effective. Automatic exchange pairing is increasingly demanding in such communities, and potentially leading to new business opportunities. This means, the system user will have the ability to list certain products he or she no longer need, as well as some required items he or she is looking for. Such systems exist in the market but are not very popular. The users need to make decisions on what they want to add in the Wishlist. This is the place where a proper recommendation engine can contribute to identify their interests and motivates users to receive books that are available from another user. On top of that, the right recommendation engine can provide higher returns to the business as it can help boost engagement opportunities with the products and offer greater exchange recommendations to the users. The target of this project is to build an efficient exchange system with accurate and diverse recommendations which will increase the number of exchange cycles.