# HYBRID RECOMMENDATION SYSTEM USING KNOWLEDGE GRAPH IN ECOMMERCE 

## Selvakumaran Thayaan

A dissertation submitted in partial fulfilment of the requirement for Bachelor of Engineering (Honors) degree in Software Engineering

Department of Computing<br>Informatics Institute of Technology, Sri Lanka in collaboration with<br>University of Westminster, UK


#### Abstract

E-commerce recommender systems can assist clients with discovering what they wanted or new items they may be liked on. To consistently upgrade user trust in the site, improve page visits also, stay time, and in particular, increment net product esteem, it is critical to comprehend furthermore, catch the significant data covered up in the information the recommendation system needs the attributes of the users and items to do the best recommendation system.

In here we are going to go through the fashion datasets in amazon which was mostly used datasets in fashion industry. In here we are going to make not only user gave rating to particular item-based interaction we going to have multiple ways of interaction to do the proper recommendation for in this case we are going to use the knowledge graph for making different types of interactions and for knowledge graph we are going to use neo4j graph database.

And also, we going to use different type of the approach of current technologies to do the neural collaborative filtering technologies to do the better recommendation with deep learning and we are going to do the data filtering approaches to separate the items in different types to make the recommendation system greatly, because we are using these things to improve the data quality in recommendation.


Keywords: Hybrid Recommendation, Knowledge graph, neo4j, Matrix Factorizations, Neural Collaborative Filtering, data filtering

