A NOVEL RECOMMENDATION MODEL REGULARIZED WITH USER TRUST AND ITEM RATINGS

A project report submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF TECHNOLOGY

In

COMPUTER SCIENCE AND ENGINEERING

Submitted by

D.NAGA KAIVALYA
Reg.No.16811A0516

D.VASANTHA LAKSHMI
Regd.No.16811A0515

K.MANASA SRI LAXMI
Regd.No.16811A0533

G.GOWTHAM
Redg.No.16811A0526

Under the guidance of

Mr. K.VARA PRASAD, M.Tech
Assistant professor

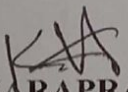*Department of Computer Science and Engineering*

AVANTHI INSTITUTE OF ENGINEERING &TECHNOLOGY
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MAKAVARAPALEM, NARSIPATNAM,
VISAKHAPATNAM-531113
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VISAKHAPATNAM-531113

CERTIFICATE

This is to certify that the project entitled "A NOVEL RECOMMENDATION MODEL REGULARIZED WITH USER TRUST AND ITEM RATINGS" in partial fulfillment for the of degree of Bachelor of Technology in COMPUTER SCIENCE AND ENGINEERING, at AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, MAKAVARAPALEM, VISAKHAPATNAM is an bonafied work carried out by D.NAGA KAIVALYA (16811A0516), D.VASANTHA LAKSHMI (16811A0515), K.MANASA SRILAXMI (16811A0533), G.GOWTHAM (16811A0526) under the guidance and supervision during 2019-2020.

(K.VARAPRASAD)   (P. MANIKANTA MANOHAR)
Project Guide   **Head of the Department**

External Examiner

Abstract

In recent years, online shopping is becoming more and more popular. There are thousands of product available in e-commerce sites .when it need to decide whether to purchase a product or not online. The opinion of others becomes important that way people generally tend to buy products recommended to them by their friends or the people are trusted. However people face the information overloading problem in the recovery of information, but still suffer from persistent problems related to cold-start and data sparsity. How to mine valuable information from reviews to understand a user's preferences and make a true recommendation is important. Traditional recommender systems (RS) considers some factors, such as user's purchase records, product category, and geographic location. In this work, it proposes a sentiment-based rating prediction method to improve prediction accuracy in recommender systems. Firstly, it recommended a social user sentimental measurement approach and calculate each user's sentiment on items/products. Secondly, it not only considers a user's own sentimental attributes but also take interpersonal sentimental influence into consideration. Then, consider product reputation, which can be inferred by the sentimental distributions of a user set that reflect customers' comprehensive evaluation. In this all the three factors-user sentiment similarity, interpersonal sentimental influence, and item's reputation similarity into our recommender system to make an accurate rating prediction. It conducts a performance evaluation of the three sentimental factors on a real-world dataset collected from Yelp. Investigational results show the sentiment can well characterize user preferences, which help to improve the recommendation performance.