Research Problem

Online retailing is the modern trend in shopping, the users have to search for specific products when they need to get a service through ecommerce. Searching is a time consuming task, even a second is worth millions, users have to waste time in searching for items.

Sometimes users have no idea on what to search (Lack of Key Words), even they have an idea they will not find the item they need on the first run. Reason is that they are not familiar with the words they are searching. So the users have to waste more time on searching items.

Owners of the online retailing's are struggling on suggesting accurate products for each customer based on the customer taste.

Solution we proposed

iRecommender

Social Networks of specific users are analyzed when they are using online retail stores to buy a specific product. On the point of registering and login to store, "iRecommender" tracks the current users public shared contents (Eg: - "twitter: - text") and analyze the user tweets to predict the taste of the customer. Our main target is Studying Customer Behavior through the Social Networks.

The users are prompted to link their social networks on the point of registering with the online retail store. "iRecommender" analyses their social network shared contents (Texts). And The determined data are stored and exposed to machine learning techniques and data mining techniques to predict the needs of customer.

"iRecommender" automates the searching process based on the predicted outcome. With the solution provided the time wastage of the user is reduced and the searching process is made more accurate to the customer. And this solution causes to increase the sales of the online store.

"iRecommender" solves the struggling issues that were faced by the store owners in suggesting best suitable products for their customers. the specific online stores which are using "iRecommender" will get a higher reputation and higher income among the competitors.

Objectives

In general, research objectives describe what we **expect to achieve** by the project.

Customer Perspective	Business Perspective
• Without any trouble, user could buy the products which he needed most.	• Increase sales of the e-commerce web sites
• Time saving	• Recognize the customer taste when browsing.
• Customer doesn't need to have any special technical knowledge to search.	• Increase loyalty of Customers.

Functions

• Developing e-commerce web site (Demonstration)	Minor (All)
• Extracting text from Social Media Networks using their APIs. Ex: Twitter	Major (Sehan & Dhanushka)
• Analyzing extracted tweets using Natural Language Processing Techniques and save the extracted key words to the Database	Major (Sehan & Dhanushka)
• Identifying the patterns from the key words saved on the Database for each specific user.	Major (Sameera & Buddhika)
• Using statistics and Machine Learning techniques, predict the trend of each specific user.	Major (Sameera & Buddhika)
• Trend for each user is predicted from the data stored on the Database.	Minor (All)
• According to gathered Data to suggest the accurate product to each user, Develop iRecommender plugin.	Minor (All)

Note :**Major – Research part

SLIIT
COMPUTING | BUSINESS | ENGINEERING

Group Details

Student Name	ID
M.S.D Dharmawardhana (Leader)	IT14048906
W.W.G.B.P Bandara	IT14015472
K.M.S Bandarage	IT12010554
A.G.D Udayanga	IT14034350