



## Sri Lanka Institute of Information Technology

### PROJECT REGISTRATION FORM

The purpose of this form is to allow final year students of the B.Sc. (Hon) degree program to enlist in the final year project group. Enlisting in a project entails specifying the project title and the details of four members in the group, the internal supervisor (compulsory), external supervisor (may be from the industry) and indicating a brief description of the project. The description of the project entered on this form will not be considered as the formal project proposal. It should however indicate the scope of the project and provide the main potential outcome.

PROJECT TITLE	iRecommender for e-commerce
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RESEARCH GROUP	Group No 27
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PROJECT NUMBER	
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#### PROJECT GROUP MEMBER DETAILS:

	STUDENT NAME	STUDENT NO.	CONTACT NO.	EMAIL ADDRESS
1	M.S.D Dharmawardhana (Leader)	IT14048906	0778844276	sehan.qs@gmail.com
2	W.W.G.B.P Bandara	IT14015472	0772878383	buddhikapbandara@gmail.com
3	K.M.S Bandarage	IT12010554	0718875505	sameerabandarage@gmail.com
4	A.G.D Udayanga	IT14034350	0779930208	dhanushka.udy@gmail.com

**SUPERVISOR**

Mrs. Dinuka Wijendra		
Name	Signature	Date

**CO-SUPERVISOR**

Name	Signature	Date

**EXTERNAL SUPERVISOR**

Name	Affiliation	Contact Address	Contact Numbers	Signature/Date

**ACCEPTANCE BY CDAP MEMBER**

Name	Signature	Date

## PROJECT DETAILS

### Brief Description of your 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 (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 are struggling on suggesting their products for each customer based on customer taste.

### Description of the Solution:

#### **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.

## Main expected outcomes of the project:

1. Increase sales of e-commerce sites.
2. Overcome struggles faced on product suggestions at e-commerce websites by site administrators.
3. Reduce time wastage faced by Clients on searching products.
4. Accurate product suggestions on e-commerce websites for consumers.

## WORKLOAD ALLOCATION (Please provide a brief description about the workload allocation)

MEMBER 1	A.G.D Udayanga
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**Social media mining and analyzing agent development.**

1. Tweets of each user are accessed through the Twitter API.
2. Users Geographical location and the age are extracted through the twitter API.
3. Develop an algorithm to filter the product names and emotions (key words) from the tweets using NLP techniques. (Research part)
4. The filtered key words are passed to the **predictor**.

MEMBER 2	M.S.D Dharmawardhana
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**User Opinion Predictor agent development.**

1. Develop an ontology to analyze the extracted data from analyzing agent. (Research Part)
2. For each user, Identifying the positivity and negativity feeling about the product using the ontology developed.
3. The analyzed data are passed to the trend **predicting agent**.

MEMBER 3	K.M.S Bandarage
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**Trend predicting agent development.**

1. Develop an algorithm to predict the product suggestions. (Research Part)
  - a. Initial suggestions are based on the details collected by User Opinion Predictor agent and initial web mining data (Age, Geographical Location, Gender)
  - b. After passing the learning time of the algorithm, it is predicting the suggestions based on web mining data from **validation agent, opinion predictor** and initial web mining data (Age, Geographical Location, Gender)
2. According to the geographical area, develop an algorithm to determine the taste of the customer using web mining techniques.

MEMBER 4	W.W.G.B.P Bandara
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**Validation Agent (Web Mining) and Customer behavior analyzer development.**

1. Track and record the user behavior and the activities on the website from the point of login.
2. Develop an algorithm to validate the predicted suggestions by the trend predicting agent using the analyzed data to give the most accurate product suggestions for each customer. (Research Part)
3. Develop Tracking algorithms and methods for the e-commerce websites in order to collect web mining data.
4. Passing web mining data (Validity of the suggestions and the Status of the suggested product) to the **Trend predicting agent** to adopt the product suggestions dynamically for future logins of the user.

**DECLARATION**

“We declare that the project would involve material prepared by the Group members and that it would not fully or partially incorporate any material prepared by other persons for a fee or free of charge or that it would include material previously submitted by a candidate for a Degree or Diploma in any other University or Institute of Higher Learning and that, to the best of our knowledge and belief, it would not incorporate any material previously published or written by another person in relation to another project except with prior written approval from the supervisor and/or the coordinator of such project and that such unauthorized reproductions will construe offences punishable under the SLIIT Regulations.

We are aware, that if we are found guilty for the above mentioned offences or any project related plagiarism, the SLIIT has right to suspend the project at any time and or to suspend us from the examination and or from the Institution for minimum period of one year”.

	STUDENT NAME	STUDENT NO.	SIGNATURE
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