Sri Lanka Institute of Information Technology

PROJECT REGISTRATION FORM

(This form should be completed and submitted on or before 3.00 PM, Wednesday 30th December, 2015)

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	Image content based classification of vacation/tourism related images

RESEARCH GROUP	105

PROJECT NUMBER		(will be assigned by the lecture in charge)

PROJECT GROUP MEMBER DETAILS: (Please start with group leader's details)

	STUDENT NAME	STUDENT NO.	CONTACT NO.	EMAIL ADDRESS
1	Amjad M.N.M(GROUP LEADER)	IT13047566	0777794757	amjadnaz1000@gmail.com
2	Gunathilaka M.A.S.S	IT13018238	0767124404	ssgunathilaka@gmail.com
3	Weligampola L. P.	IT13081744	0712973088	lasiprabo@gmail.com
4	Gunasinghe S.U	IT13022570	0714014566	sachigunasinghe@gmail.com

SUPERVISOR

Rohana Thilakumara		
Name	Signature	Date

CO-SUPERVISOR (will be assigned by the Supervisor, if necessary)

Name	Signature	Date

EXTERNAL SUPERVISOR (if any, may be from the industry)

Name	Affiliation	Contact Address	Contact Numbers	Signature/Date

ACCEPTANCE BY CDAP MEMBER

Name	Signature	Date

PROJECT DETAILS

Brief Description of your Research Problem:

Grouping images into (semantically) meaningful categories using low-level visual features is a challenging and important problem in content-based image retrieval and classification. Humans look at images and easily to identify the objects and scenarios in the images, using the knowledge and experience of what they have seen and gained thorough their lifetime but computers or more specifically computer programs cannot clearly identify what the images represents and what the contents of the images are. This is a major requirement in intelligent web applications that need to classify and if possible identify the content in images quickly and reliably. This is a hot current research area in image processing.

Description of the Solution:

An intelligent image processing application that is able to identify objects in an image and scenarios in the images using the objects in the images and classify the objects in the images and Group the images into (semantically) meaningful categories using low-level and high-level visual features. Specifically, we consider the hierarchical classification of vacation images; at the highest level, images are classified as indoor or outdoor; outdoor images are further classified as city, village, town or landscape etc; finally, a subset of landscape images is classified into waterfalls, beaches, sunsets/sunrise, forest, and mountain etc classes. The application will be able to identify the objects and features in those images and classify them accordingly to be used by other web applications. furthermore the application will be able to learn(train the system) from the images it classifies and will be able to quickly and accurately identify the images as it progresses. The algorithm will be demonstrated for identifying tourist attraction locations in images and classifying them.

Main expected outcomes of the project:

The outcome of the project will be an application that is able to classify and Group a given image or set of images related to vacation/traveling into semantically meaningful categories and if possible identify the place or scenery in the image and output the classified set of images grouped semantically or a list of the identified categories of images to be used by other web applications for further

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

MEMBER 1

Image Spatial representation and segmentation

The image is segmented into a grid and represented in a spatial map and related histograms

Are generated for further processing using image processing techniques

MEMBER 2

Object formation from segmented images parts

The segmented images parts are organized and objects are identified from them using image processing techniques and machine learning algorithms

MEMBER 3

Image recognition and identification

The pre formed objects are identified and labeled using machine learning algorithms and Artificial intelligence techniques

MEMBER 4	

Context identification and classification

The identified objects and images are analyzed in relation to each other and the context of the image is identified and classified using machine learning algorithms and Artificial intelligence techniques

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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