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**LARGE SCALE LEARNING OF FOOD**

**IMAGE CLASSIFICATION**

**A PROJECT REPORT**

***Submitted by***

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***in partial fulfillment for the award of the degree***

***of***

**BACHELOR OF INFORMATION**

**IN**

**INFORMATION TECHNOLOGY**

**PANIMALAR ENGINEERING COLLEGE, CHENNAI-600123**

**ANNA UNIVERSITY: CHENNAI-600 025**

**APRIL 2015**

**BONAFIDE CERTIFICATE**

Certified that this project report “**LARGE SCALE LEARNING OF FOOD**

**IMAGE CLASSIFICATION”** is the bonafide work of **R.S.ABBIRAMI (211411205001),ABHINAYA.A(211411205002),P.KAVIVARTHINI.P(211411205049),T.RUPIKA(211411205078)** who carried out the project work under my supervision.

**SIGNATURE SIGNATURE**

**Dr.M.HELDA MERCY, M.E., Ph.D., Mrs.A.VINODHINI, M.E.,**

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Certified that the above mentioned students were examined in the university

Project viva-voce held on \_\_\_\_\_\_\_\_\_\_\_\_\_.

INTERNAL EXAMINER EXTERNAL EXAMINER

**DECLARATION**

I hereby declare that the project report entitled “**LARGE SCALE LEARNING FOR FOOD IMAGE CLASSIFICATION**” which is being submitted in partial fulfilment of the requirement of the course leading to the award of the ‘Bachelor Of Technology in Information Technology ’ in **Panimalar Engineering College, Affiliated to Anna University- Chennai** is the result of the project carried out by me under the guidance and supervision of **Mrs.A.VINODHINI M.Tech.,Assistant Professor in the Department of Information Technology**. I further declare that I or any other person has not previously submitted this project report to any other institution/university for any other degree / diploma or any other person.

Date:

Place: Chennai

Signature of batch members

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It is certified that this project has been prepared and submitted under my guidance.

Date:

Place:

**A.VINODHINI,**

**ASSISTANT PROFESSOR**

**ACKNOWLEDGEMENT**

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**ABSTRACT**

Since health care on foods is drawing people's attention recently, in this paper we propose a computer vision based food recognition system could be used to estimate food for diabetes patients. This study proposes a methodology for automatic food recognition, based on the Bag of Features (BoF) model. In this typical scenario, the user acquires an image using camera. The image is processed in order to extract a series of features describing its properties. Features are fed to a classifier to recognize various food types of acquired image. An extensive technical investigation was conducted for the identification and optimization of the best performing components involved in the BoF architecture, as well as the estimation of the corresponding parameters .We present an approach to find out the group and location of objects in images. The system computes dense local features using scale invariant features. It performs very fast classification of each pixel in an image. For the design and valuation of the proposed system, a image dataset with nearly 5000 food images was created and organized into 11 classes. This system has achieved the accuracy of 78% thus proving the feasibility of the proposed approach in a very challenging image dataset.