IMPLEMENTATION OF

FACIAL KEY POINTS DETECTION SYSTEM



A Thesis report presented to the National University in partial fulfilment of the requirement for the degree of M.Sc.(Master’s) in Computer Science & Engineering



Submitted By

Md. Ikramul Murad

Registration Number: 15602000014

Session: 2015-2016

Department of Computer Science and Engineering

Institute of Science and Technology

National University, Bangladesh

**DECLARATION**

I hereby declare that I have completed the work of this thesis under the supervision of Ditee Yasmeen, Assistant Professor, Department of Computer Science and Engineering (CSE), Institute of Science and Technology (IST), affiliated with the National University of Bangladesh. I also declare that neither this thesis nor any part of this has been submitted elsewhere for the award of any degree.

Signature

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Md. Ikramul Murad

Registration Number: 15602000014

Session: 2015-2016

Department of Computer Science and Engineering

Institute of Science and Technology

National University, Bangladesh

**APPROVAL**

The thesis “Implementation of Facial Key Points Detection System” submitted by Md. Ikramul Murad, Registration No: 15602000014 to the Department of Computer Science and Engineering, Institute of Science and Technology (IST), Dhaka, Bangladesh has been accepted as satisfactory for the fulfillment of the requirements for the Degree of Master of Science in Computer Science and Engineering under National University and approved as to its style and contents.

**Signature of Internal Examiner 1. Signature of External Examiner**

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Ditee Yasmeen

(Supervisor)

Assistant Professor

Department of Computer Science and Engineering **2. Signature of External Examiner**

Institute of Science and Technology (IST)

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**ABSTRACT**

This paper gives the intersection between the vision based and knowledge based facial key points detection system which will be used in several modern world applications. It undertakes two primary tasks; namely understanding of the traditional vision based system provided by the OpenCV and a proposed methodology to make them more accurate in facial key points detection. The proposed methodology uses both vision and knowledge for the facial key points detection procedure. This system can be used as a building block in several applications, such as Track faces in images and videos, Analyzing facial expressions, Detecting facial signs for medical diagnosis, Biometrics etc. This paper provides a generalized solution for facial key points detection system for the field of modern applications.

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