Department of Electrical and Computer Engineering

North South University

Senior Design Project

Face Recognition LogIn System

Md. Ibrahim Khalil Ullah **ID 1812015042**

Md. Mehraj Uddin **ID 1813213643**

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Faculty Advisor

Md. Abu Obaidah

Associate Professor

ECE Department

Summer, 2022

LETTER OF TRANSMITTAL

5 September, 2022

To

Dr. Rajesh Palit

Chairman,

Department of Electrical and Computer Engineering

North South University, Dhaka

Subject: Submission of Capstone Project Report on "Face Recognition LogIn System"

Dear Sir,

With due respect, we would like to submit our Capstone Project Report on "Face Recognition LogIn System" as a part of our BSc program. The report deals with secured and fast user access for any web or web application based program. This project was very much valuable to us as it helped us gain experience from practical fields and apply in real life. We tried to the maximum competence to meet all the dimensions required from this report.

We will be highly obliged if you kindly receive this report and provide your valuable judgment. It would be our immense pleasure if you find this report useful and informative to have an apparent perspective on the issue.

Sincerely Yours,

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Md. Ibrahim Khalil Ullah

ECE Department

North South University, Bangladesh

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Md. Mehraj Uddin

ECE Department

North South University, Bangladesh

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Oali Ullah

ECE Department

North South University, Bangladesh

Approval

The capstone project entitled **"Face Recognition LogIn System"** by **Md. Ibrahim Khalil Ullah (ID #1812015042), Md. Mehraj Uddin (ID #1813213643),** and **Oali Ullah (ID #1612545042)** is approved in partial fulfillment of the requirement of the Degree of Bachelor of Science in Computer Science and Engineering in September 2022 and has been accepted as satisfactory.

Supervisor's Signature

Md. Abu Obaidah
Associate Professor
Department of Electrical and Computer Engineering
North South University
Dhaka, Bangladesh.

Department Chair's Signature

Dr. Rajesh Palit
Professor & Chair
Department of Electrical and Computer Engineering
North South University
Dhaka, Bangladesh.

Declaration

This is to certify that this Project is our original work. No part of this work has been submitted elsewhere partially or fully for the award of any other degree or diploma. Any material reproduced in this project has been properly acknowledged.

Students' name & Signature

1. **Md. Ibrahim Khalil Ullah**

2. **Md. Mehraj Uddin**

3. **Oali Ullah**

Acknowledgement

First of all, we wish to express our gratitude to the Almighty for giving us the strength to perform our responsibilities and complete the report.

The capstone project program is very helpful to bridge the gap between theoretical knowledge and real life experience as part of the Bachelor of Science (BSc) program. This report has been designed to have practical experience through theoretical understanding.

We also acknowledge our profound sense of gratitude to all the teachers who have been instrumental for providing us the technical knowledge and moral support to complete the project with full understanding.

It is imperative to show our appreciation for our honorable faculty member Md. Abu Obaidah for his undivided attention and help to achieve this milestone. Also, our gratitude is divine to the North South University, ECE department for providing us courses such as CSE 499A and CSE 499B in which we could really work on this project and materialize it the way we have dreamt of.

Abstract

Face Recognition LogIn System

We can identify human faces using a web camera which is known as Face Detection. This is a very effective technique in computer technology. There are used different types of attendance systems such as log in with the password, punch card, fingerprint, etc. With rapid growth in the application of AI, Access Control Systems are walking in a new technology lane. Powered by deep learning technologies or cognitive analytics, login pages can implement more secure, efficient, and easy to use authentication systems. In this project, we have introduced a Facial Recognition type LogIn System that can identify a specific face by analyzing and comparing patterns of a digital image.

This system is the Tensorflow LogIn System based on face detection. Primarily, the device captures the face images and stores the captured images into the specific path of the computer relating the information into a database. When anybody tries to enter into any website through this LogIn System, the system captures the image of that particular person and matches the image with the stored image. If this image matches with the stored image then the system allows the person to enter the website, otherwise the system denies entry.