

Department of Electrical and Computer Engineering

North South University



Senior Design Project

A Weather Station for Collecting Local Climate and Environmental Data and Predicting Weather

Mahadiul Islam Shakib ID # 1511080645

Ishtiaq Ahmed Chowdhury ID # 1610253642

Faculty Advisor

Md. Shahriar Karim

Assistant Professor

ECE Department

FALL, 2020

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. **Mahadiul Islam Shakib**

Mahadiul Islam Shakib.

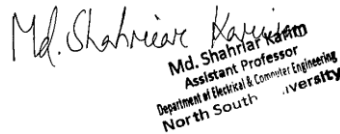
2. **Ishtiaq Ahmed Chowdhury**

Ishtiaq Ahmed Chowdhury.

APPROVAL

The capstone project entitled “A Weather Station for Collecting Local Climate and Environmental Data and Predicting Weather” by Mahadiul Islam Shakib (ID#1511080645) and Ishtiaq Ahmed Chowdhury (ID #1610253642) is approved in partial fulfillment of the requirement of the Degree of Bachelor of Science in Computer Science and Engineering on January,2021 and has been accepted as satisfactory.

Supervisor’s Signature



Md. Shahriar Karim
Assistant Professor
Department of Electrical & Computer Engineering
North South University

Md. Shahriar Karim

Assistant Professor

Department of Electrical and Computer Engineering

North South University

Dhaka, Bangladesh..

Department Chair’s Signature

Dr. Rezaul Bari

Associate Professor & Chair

Department of Electrical and Computer Engineering

North South University

Dhaka, Bangladesh.

ACKNOWLEDGMENT

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 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 a practical experience through the 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. Shahriar Karim for his undivided attention and help to achieve this milestone. Also, our gratefulness is divine to the North South University, ECE department for providing us a course such as ETE499/CSE499 in which we could really work on this project and materialize it the way we have dreamt of. We thank our friends and family for their moral support to carve out this project and always offer their support.

ABSTRACT

Weather is one of the most important environmental constraints in every phase of our lives on the earth. Prediction requires accurate classification of data. To predict things that are going to happen in future we need to do analysis on the factors that are related directly or indirectly. So as to make every day plans we have to rely on weather and need to know weather conditions beforehand, which could be achieved by predicting the weather condition such as humidity, rainfall, temperature, rain etc. And thus helps ourselves protect from abnormal conditions and avoids unnecessary delays. Besides, weather plays the most important role in the field of agriculture. Knowing weather conditions beforehand will help to plan harvesting to produce the maximum and avoid the loss and damages due to natural calamities. That's why we are introducing a device for collecting local weather data and predicting the weather. It will predict the temperature, humidity and precipitation of any date past, present or future. The predictions will allow the people specially farmers to take preventive measures and make better decisions for the future