IoT Based Automated Hydroponic Farming System

EEE499/CSE499 report submitted in partial fulfilment
of the requirements for the degree

of

Bachelor of Science in Electrical and Electronics Engineering
&
Bachelor of Science in Computer Science and Engineering

by

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NORTH SOUTH UNIVERSITY
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DECLARATION

Project Title: IoT Based Automated Hydroponic Farming System
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This report is prepared as a requirement of the Senior Design Project (EEE499/CSE499). A & B is a two-semester long senior design course. We declare that this EEE499/CSE499 report entitled "**IoT Based Automated Hydroponic Farming System**" has not been accepted for any degree and is not concurrently submitted in the candidature of any other degree. We would like to request you to accept this report.

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APPROVAL

This is to certify that the EEE499/CSE499 report entitled "**IoT Based Automated Hydroponic Farming System**", submitted by **Ihfaz Tahmid Morshed** (Student ID: 1530879642), **Sakib Asrar** (Student ID: 1530620643), **Fahim Tanzil Takin** (Student ID: 1722192642) and **Tanvirul Azim** (Student ID: 1530617043) are undergraduate students of the **Department of Electrical & Computer Engineering**, North South University. This report partially fulfils the requirements for the degree of Bachelor of Science in Computer Science and Engineering and has been accepted as satisfactory.

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ABSTRACT

The objective of this project is to control the environmental elements for farming using automated technology. An IoT based automated hydroponic system is proposed by which crops can grow in water with the necessary elements of the soil. The hydroponic method reduces water consumption up to 95% of regular farming, automates the regulation of the environment and nutrients in the farm to maximize production. Therefore, farmers can control all environmental elements with a minimum of time and effort. The proposed system can be remotely controlled and monitored via IoT. Using this farming method, crops can grow in any environment regardless of places and seasons.