Department of Electrical and Computer Engineering
North South University

Senior Design Project

Aquatic Iguana: Water Waste Collector Drone with Water Quality Monitoring System

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Faculty Advisor:

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Spring, 2019

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.

<u>Students' names & Signatures</u>

1. Abdullah MD. Humayun Kabir

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2. Mirza Turesinin

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3. Tanzina Mollah

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4. Sadvan Sarwar

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APPROVAL

We, **Abdullah MD. Humayun Kabir (1511828042)**, **Mirza Turesinin (1511819042)** and **Tanzina Mollah (1511777042)**, **Sadvan Sarwar (1511912042)**, members of CSE: 499 (Senior Design) from the Electrical and Computer Engineering department of **North South University**; have worked on the project titled **"Aquatic Iguana: Water Waste Collector Drone with Water Quality Monitoring System"** under the supervision of Dr. Shazzad Hosain as a partial fulfillment of the requirement for the degree of Bachelors of Science in Engineering and has been accepted as satisfactory.

Supervisor's Signature

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Dr. Shazzad Hosain
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Chairman's Signature

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Dr. K. M. A. Salam
Professor & Chairman

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ACKNOWLEDGEMENT

By mercy of the Almighty we have completed our senior design capstone project entitled "Aquatic Iguana: Water Waste Collector Drone with Water Quality Monitoring System".

Foremost, we would like to express our sincere gratitude to our advisor Dr. Shazzad Hosain for his continuous support in our capstone project progress throughout the whole 499A and 499B, for his patience, motivation, enthusiasm, and immense knowledge. His guidance helped us in all the time of research, writing and completing of this project.

Our sincere thanks also goes to North South University, Dhaka, Bangladesh for providing an opportunity in our curriculum which enabled us to have an industrial level experience as part of our academics.

Last but not the least, we would like to thank our family as their inspiration and guidance kept us focused and motivated.

Abstract

"Aquatic Iguana", a water drone which moves around the surface of water and collects floating waste material such as plastic, packets, leaves etc. Aquatic Iguana also collects data from water such as temperature of water, pH level, measures turbidity of water and sends it to the ThingSpeak server. It is controlled by a Radio Controller. A camera provides the view of surroundings to make the control system easier for the operator. We have developed this product to ensure the cleaning of water resources and to create a strong dataset of water quality for future prediction.