

Senior Design Project Report

CSE499

BOMB DEFUSAL ROBOT



Submitted By

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Supervisor

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Summer,2021

DECLARATION

This is to declare that this report is a hardware-based implementation and is self-contained for the purpose of submission as a part of the Senior Design course in the semester of Summer 2021 at North South University and has not been used elsewhere for any other reason. The materials that are obtained from other source are duly acknowledged in this project. Any similarities, in wording, if found in other papers, which has not been cited, is a subject of pure coincidence.

Declared By:

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Name: AL AMIN HOSSAIN
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APPROVAL

The senior Design Project entitled “**BOMB DEFUSAL ROBOT**” by

AL AMIN HOSSAIN ID# 1620017042

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has fulfilled all requirements that are required for the completion of bachelors in Science in Electrical and Electronic Engineering program at NSU on Summer 2021.

Approved By:

Dr. Shahnewaz Siddique 31/10/21 (E-signature)
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Supervisor
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Dr. Rezaul Bari
Chair, Department of Electrical and Computer Engineering
North South University, Dhaka, Bangladesh

ACKNOWLEDGEMENT

By kindness of the Almighty we have successfully completed our senior design project entitled “Bomb Defusal Robot”.

We would like to begin with our gratitude towards North South University’s Department of Electrical Engineering and Computer Science for providing us such a platform that we could showcase our design capabilities, troubleshooting ability and implementation of theoretical knowledge fed to us through the core courses designed in the program and ultimately leading to the completion of senior design project.

Our deep gratitude goes to my faculty advisor Dr. Shahnewaz Siddique, who expertly guided us in our senior design project throughout the whole CSE499A and CSE499B. His guidance helped us in all type of research, writings and completing the project. Lastly, we would like to be grateful to our friends and family as their inspiration and guidance kept us focused and motivated.

BOMB DEFUSAL ROBOT

ABSTRACT

Robotics is the pinnacle of success in the field of engineering. People uses robots to do from simplest household works to complex tasks in space. Bomb disposal robot is a tool to help the bomb defusing squad. It's a four wheeler steel bodied robot with a 4 DOF arm. A camera and metal detector is used to give feedback to the user. All functions can be remotely operated by a controller. DC servo motor is used as actuator of the arm and it's controlled by a micro controller. A total of 4 motors (2+2) are parallely connected to aid movement in all directions. The goal of this project is to find, inspect and dispose bomb while keeping humans at a safe distance. This paper contains methodology of development of a bomb disposal robot with 4 DOF arm.