NORTH SOUTH UNIVERSITY

Department of Electrical and Computer Engineering

SENIOR DESIGN PROJECT

Eyes For You
A Deep Learning IoT device to assist visually impaired persons

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Declaration

It is hereby acknowledged that:

- No illegitimate procedure has been practiced during the preparation of this document.
- This document does not contain any previously published material without proper citation.
- This document represents our own accomplishment while being Undergraduate Students in the North SouthUniversity.

Sincerely,

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Approval

I certify that I have read this dissertation and that, in my opinion, it is fully adequate in scope and qualityas a dissertation.

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I certify that I have read this dissertation and that, in my opinion, it is fully adequate in scope and quality as a dissertation.

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Eyes For You:

A deep learning IoT device to assist visually impaired persons.

Abstract:

We live in an era where people occupy their own lives. All have to make their living depending on none. Nevertheless, some people need the help of others to do their daily chores. They can be disabled, blind, or physically challenged. Among them, visually impaired persons suffer the most even in this modernized world, as any alternative to eyesight has not been invented yet. Also, people's eye health may get worse with time. Irrespective of the way of visual impairment, individuals suffering from it feel burden to others. So, we are trying to help them make their lives a little easier than usual through our machine. We have proposed a machine that will help people walk safely anytime. The device helps the user detect any obstacle, measure the distance between the user and the obstacle, measure the obstacle's speed or velocity, and the direction of the obstacle. Our device can detect up to 80 objects and inform our users that there is obstacle around him, that is how he can move freely around households.