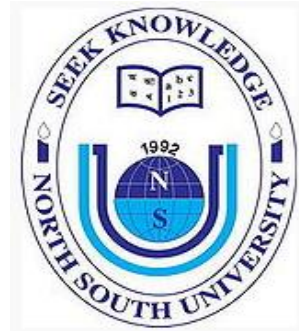


Senior Design Project Report

CSE/EEE/ETE 499

Eliya: An AI Robot, Assistant of the ECE Department, NSU



Submitted By

[Sakib Ahmed-1611100042]

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Supervisor

Tanjila Farah

Senior Lecturer

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

NORTH SOUTH UNIVERSITY

[Fall 2019]

Agreement Form

We take great pleasure in submitting our senior design project report on “ **Eliya: An AI Robot, Assistant of the ECE Department, NSU**”. This report is prepared as a requirement of the Capstone Design Project CSE/EEE/EET 499 A & B which is a two semester long senior design course. This course involves multidisciplinary teams of students who build and test custom designed systems, components or engineering processes. We would like to request you to accept this report as a partial fulfillment of Bachelor of Science degree in Electrical and Computer Engineering Department of North South University.

Declared By:

.....
Name: Sakib Ahmed
ID: 1611100042

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Name: Debashish Paul
ID: 1520935642

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Name: Rubaiya Masnun
ID: 1610273042

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Name: Minhaz Uddin Ahmed Shanto
ID: 1521144642

Approval

This capstone project entitled “**Eliya: An AI Robot, Assistant of the ECE Department, NSU**” by **Sakib Ahmed(ID#1611100042)**, **Rubaiya Masnun(ID#1610273042)**, **Minhaz Uddin Ahmed Shanto(ID#1521144042)** and **Debashish Paul(ID#1520935642)** is approved in partial fulfilment of the requirements of the Degree of Bachelor of Science in Computer Science and Engineering and has been accepted as satisfactory.

Supervisor’s Signature

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Tanjila Farah

Sr. Lecturer, Department of Electrical and Computer Engineering
North South University, Dhaka, Bangladesh

Department Chairman’s Signature

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Dr. Mohammad Rezaul Bari

Chairman & Associate Professor, Department of Electrical and Computer Engineering
North South University, Dhaka, Bangladesh

ABSTRACT

Eliya: An AI Robot, Assistant of the ECE Department, NSU

In our ECE Department at North South University, there are almost seven thousand students and hundreds of faculty members, many of them most often have the same quarries regarding departmental staff, but there are not enough human resources to answer all of them always. Also, the officers assigned to the help desk at the department sometimes may get bored giving the same sort of answers again and again to a lot of people and their office hours are limited also. This is why we have come up with an idea to develop an AI Robot for our department which will be able to give information regarding the departmental staff to the students and faculty members. Now about Artificial Intelligence (AI)- Artificial Intelligence is one of the most invigorating fields in Robotics. There has always been a question about a robot's intelligence but nowadays Robotics is reaching a new level of height in the AI field. Usually, an AI Robot gathers information about an incident or situation through sensors or human inputs and in our project, we are using human inputs to make our robot useful for assistance. Our Robots will assist only in the fields it is programmed to assist indeed; it will not have the general analytical ability. But if our Robot cannot assist in something, it will give a response showing its inability to do that. Now going to the features and how they are going to work; our Robot will be voice-controlled where we will be using Machine Learning and NLP for controlling. Then for movement and speaking, we will be using motors and speakers in the robot. It will give feedback to different questions using AI. We will be using voice recognition in the robot to recognize specific people. The robot will take orders from the supervisor again with voice recognition. It will interact with general people using Machine Learning. The actual challenge in making an AI Robot is to understand how natural intelligence works, for example: in our project, it would be really tough for the robot to move in the right path always as people can do. But if we can provide it with a good mapping Algorithm, then its problems will be reduced. We have decided to work on AI Robots as we believe robots will gradually move out from the industrial and scientific worlds into our daily life.