

**DESIGN AND IMPLEMENTATION OF A WEB-BASED SMART
RFID STUDENT ID CARD READER**

**IN PARTIAL FULFILLMENT OF REQUIREMENTS FOR
THE DEGREE OF
BACHELORS IN ENGINEERING**

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March 2022

CERTIFICATION

This is to certify that **Orji Michael Chukwuebuka** with Registration Number **2017030180311** did this project report on **Web-Based Smart RFID Student ID Card Reader** in partial fulfillment for the award of the degree of Bachelor of Engineering (Honor) in Computer Engineering, Enugu State of Science and Technology (ESUT).

.....

Student Name

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Date:

APPROVAL

This is to certify that **Orji Michael Chukwuebuka** with Registration Number **2017030180311** did this project report on **Web-Based Smart RFID Student ID Card Reader** in partial fulfillment for the award of the degree of Bachelor of Engineering (Honor) in Computer Engineering, Enugu State of Science and Technology (ESUT).

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Dr. T. Chiagunye

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Date:

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Date:

DEDICATION

I wish to dedicate this entire project to God for seeing me through the working of this project and also to my mom and father for their support, love, understanding and moral support.

ACKNOWLEDGMENT

I want to thank the Department of Computer Engineering for giving me the opportunity to embark on this project and all my lecturers whose roles as lecturers gave me an enduring foundation and helped transform me into a visionary and focused person.

ABSTRACT

The **Smart RFID Student ID Card Reader and its Website/Data Hub** is a portable hardware device that functions as a bridge between a fully equipped server online and we the people. It acts as a confirmation device, it can check for a variety of things in the database like school fees payment, course registration and so on. It can also act as a recording device, for example, class attendance. The hardware device consists of a NodeMCU Microcontroller which comes with an ESP8266 Wi-Fi chip for internet connectivity; An RC522 RFID Card reader for reading students ID cards then Four LEDs and a Buzzer as output devices. The web server is a website built with HTML, CSS, JavaScript, PHP and MySQL; It is hosted on an Apache web server. The machine is able to scan students and communicate with the server in a matter of seconds. The project arose as a result of difficulties surrounding filing and other mandatory administrative tasks. It aims to eliminate hard copy validation and recording. All the student needs are their ID card and the machine can confirm or record every single thing about them online. It will prove to eliminate white paper use in schools and corporate offices thus making the life of students and staff alike much easier.

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