Bogoda Arachchige Sameera Sandaruwan

CONTACT

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EDUCATION

M.Eng. Electrical and Electronic Engineering (First Class Honours)

January 2013 — March 2017

Sheffield Hallam University, UK. Conducted by Sri Lanka Institute of Information Technology (SLIIT)

Throughout the course, the range of Electronic engineering subjects taught helped gain deeper knowledge about advanced design problems and how to solve them. All the lab sessions and assignments helped me get much more practical knowledge about Electronic and Electrical engineering and how systems are developed and controlled.

Subjects

- Electronic Systems
- Mobile Communication and Digital Signal Processing
- Embedded Computer Networks
- Communication Engineering
- Microprocessor Engineering
- Digital Electronic System Design
- Analog Electronics
- Digital Electronics
- Advanced Control Systems
- Microcontroller programming
- Individual Project (CENG)
- Group Project (MENG)

G.C.S.E Advanced Level

January 2010 — August 2012

St. Joseph's College, Colombo 10

G.C.S.E Ordinary Level

January 2007 — December 2009

St. Joseph's College, Colombo 10

WORK EXPERIENCE

Ceymoss Technologies

September 2016 — January 2018

Research & Development Engineer

Ceymoss Technologies is a startup company established by me, and two of my colleagues mainly focused on Software and Electronic system development and their integration. Following are the several projects we have completed.

- Bellpepper Restaurant Management system

  Tablet based order management system which replaces the printed kitchen and bar order tickets with digital displays which convey all the necessary details about an order. Advance features help the owner easy and efficient management and remote monitoring.

- Embroidery machine downtime calculating system (Remote Preventative Maintenance)

  Automatically detect the if the machine is active or not and send an immediate message to the ERP system. It allows management to easily monitor any inactive machines and take necessary actions.

Erbenlab LLC — January 2016 — June 2016

Engineer

Worked as the team leader of the Internet of Things division. Gained hands-on experience and expert knowledge in electronic device and embedded system production and equipment installation.

Hitech Solutions (Pvt) Ltd — October 2014 — January 2015

Internship

Gained expertise knowledge and hands on experience in analog electronics and how to used them to solve practical problems. Designed a Car battery charger to charge ten batteries at the same time while working as an Intern in the Mechatronics department.

PROJECTS

A Quadcopter with automated Take-off and Landing on mobile robot platform (MEng Group Project - 4th Year)

A secondary controller was implemented along side an off-the-shelf primary controller, which gives the quad copter the ability to autonomously take-off, land and follow a mobile robot platform. For the first part of the project, the full system was simulated using Matlab Simulink Multi-Body simulation environment. During the project period, several skills were gained such as managing time with group members while working as a team and finding solutions to engineering and electronics problems.

FPGA based color tracking system (CEng Individual Project - 3rd Year)

The system was based on Altera DE1-SOC FPGA development board. It can detect red, blue and green color separately and track their position on the screen.

Exercise Machine emulator using ARM Microcontroller

The system was implemented using an STM32F4 discovery development platform and had all the features of a modern exercise machine such as an Orbitrack and more. The basic interface of the system provided the user with necessary details of the workout such as elapsed time, difficulty level and at the same time provided the option to change the difficulty level at any time. The Android application integrated with the system provided much more personal details such as the calories burned which were based on the user's height and weight and the option to store workout data.

Home Automation System Using ARM Microcontroller

The home automation system has several features such as Light On/Off, fan speed control and door lock open/close using and mobile app, Bugler Detection and data logging, automatic fan speed control according to the room temperature.

“RESVAD” - Resistor Color Value Detector software using MATLAB

Gained the knowledge on the functionalities of MATLAB software tool for digital image processing. Accomplished analytical and design tasks with an approach on control

methods and practical situations.

RFID Attendance marking system

The system will be used to mark the attendance of the university students using their student ID cards. A new CSV file is generated for every session and students ID number, full name and the date and time was saved in that file. All the files were saved on an SD card.

Human Detected Auto On/Off Light

This device can be directly connected to the currently available light bulbs. The system will detect when a human was entered into the room, and it will automatically switch on the light. After the human leaves the room it will wait for 30 seconds and switch off the light. This device is very useful to reduce unnecessary power consumption.

SKILLS

- Programming languages - C, C++, Java, C#, Python, JavaScript, Node JS
- Robotics
- Control Systems
- Microcontroller programming
- Embedded System Design
- Wireless Communication

INTERESTS

- Reading
- Badminton
- Piano

EXTRA CURRICULAR

- International Orientation Week (August 2018) Mentor
- IEEEXtreme Programming Competition 9.0 (2015) - Participation
- Batch representative of Electronic Engineering Batch for 2015
- SAITM Robotic Challenge 2014 – Runners Up
- IEEE Electronic Design Competition 2014 - Participation
- IEEEXtreme Programming Competition 8.0 (2014) - Participation (Team Phentons)
- IEEE student branch active member (2013), Event Organizer (2014) and Assistant Secretary (2015)
- An active member of the Science Union and Organized the Science Day 2011

REFERENCES

References available upon request.