INOJ AKALANKA

inojakalanka@gmail.com Rathgama, Galle, Sri Lanka Portfolio

EDUCATION

University of Moratuwa

BSc (Hons) in Engineering

Nov 2016 - Present Katubedda, SL

- Biomedical Engineering Major GPA: 3.45/4.2 (as per 6th sem)
- At the final year out of 4 years of full time degree

Richmond College

G.C.E Advanced Level

Aug 2013 - Aug 2015 Galle, SL

- Studied in Physical Science Stream
- Combined Mathematics (A), Chemistry (A), Physics (B)
- National Rank: 336, District Rank: 39, Z-Score: 2.2557

EXPERIENCE

Engineering Internship

LE Robotics (Pvt) Ltd

July 2019 - Dec 2019 Minuwangoda, SL

- Researched to enhance existing object detection algorithm using ARM Assembly language
- Designed a customized Printed Circuit Board (PCB) for a Torque Sensor
- Implemented an C-Sharp application to calibrate a camera automatically before it is used for object detection

TECHNICAL SKILLS

Python | C | C-Sharp | Unity | Blender | Matlab | Scilab | Verilog | Raspberry Pi OS | OrCad | Altium | Solidworks | Multisim | Linux | Windows | MS Office

INTERESTS

- Bioinformatics
- Virtual Reality and game development
- Robotics in medicine and other Engineering Fields
- Digital Signal Processing
- Digital IC Designing (Verilog HDL)
- 3D modeling
- Programming

LANGUAGES

English
Sinhala

CAREER OBJECTIVE

- To pursue a career in different engineering fields and be a part of a research team that tries to invent novel technology which will be beneficial for human race and environment in an efficient way

PROJECTS

Measurement of Presence in VR - On going

- Use VR development, 3D modeling, bio signals and statistical knowledge in order to research for a measurement to quantify presence (someone's engagement) in Virtual Reality
- Taking part in 3D modeling VR Objects in Blender, designing questionnaire in Unity for VR etc

Promoter Discovery in Bacteria

- Used bioinformatics and Scilab software knowledge in order to discover promoter existence in given genomes and graphically represented the results in a report
- Took part in modifying the given initial codes for the assigned task, fixing the sensitive bugs in initial codes and reporting results in an attractive way

YOLO optimization using ARM Assembly

- Used ARM architectural, microprocessor and C programming knowledge in order to optimize You Only Look Once (YOLO) real-time object detection algorithm so that it can be efficiently run on Raspberry Pi 3B+
- Read through ARM ISA in order to find assembly level instructions so that mathematical calculations can be optimized using parallel computations and findings were presented to team members using PowerPoint

PCB for Torque Sensor

- Used electronic and PCB designing knowledge in order to design a PCB which can receive quantified torque data from a torque sensor and send them to a PC for further analysis
- Took part in whole PCB designing process starting from choosing relevant electronic components (microcontroller, ADC, USB-UART Converter etc) for the purpose

Camera calibration using C-Sharp

- Used C-Sharp programming knowledge and mathematical knowledge in order to develop an application to automate camera calibration process before camera is used for object detection
- Took part in familiarizing with Emgu CV library which is used for C-Sharp computer vision applications and making a template for the camera calibration application