

# INOJ AKALANKA

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📍 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 6<sup>th</sup> 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

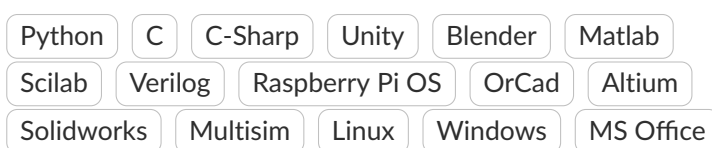
**LE Robotics (Pvt) Ltd**

📅 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



## 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