

# 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 of 4 years 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

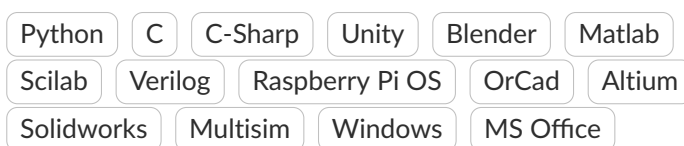
**LE Robotics (Pvt) Ltd**

📅 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

- Programming
- Web Development
- Virtual Reality and Game Development
- Bioinformatics
- Robotics in Medicine and other Engineering Fields
- Digital Signal Processing
- Digital IC Designing (Verilog HDL)
- 3D Modeling

## LANGUAGES

English  
Sinhala



## CAREER OBJECTIVE

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

## PROJECTS

**Measurement of Presence in VR - On going**

- Apply 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**

- Applied bioinformatics and Scilab software knowledge in order to discover promoter existence in given genomes and graphically represented the results in a report.
- Implemented relevant functionality in Scilab using the initial functions provided.

**YOLO optimization using ARM Assembly**

- Applied 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+.
- Studied 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**

- Applied 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 the complete PCB designing process starting from choosing relevant electronic components (microcontroller, ADC, USB-UART Converter etc) for the purpose.

**Camera calibration using C-Sharp**

- Applied 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.
- Familiarized with Emgu CV library which is used for C-Sharp computer vision applications and implemented a template for the camera calibration app.