

# Yasith Silva

Email: yasithudana3@gmail.com  
LinkedIn: linkedin.com/in/yasithsilva  
GitHub: github.com/yasith46  
Phone: +94 71 149 5119

---

## EDUCATION

**University of Moratuwa**, Sri Lanka  
*BSc. (Hons) Engineering*, Electronic and Telecommunication CGPA: 3.56/4.00  
May 2022 - Present

**D.S. Senanayake College**, Colombo 07  
G.C.E. Advanced Level (Physics, Mathematics, Chemistry) 3As / z-score 2.21  
G.C.E. Ordinary Level 9As  
2012 - 2020

**Maris Stella College**, Negombo  
2007 - 2012

## PROJECTS

### UART Transceiver using DE0-Nano FPGA Board:

UART Transceiver, communicating between two DE0-Nano FPGA Boards. The design was modified to control a series of LEDs on each board from the other, using the onboard switches on the other board.

- Designed using *SystemVerilog*
- Design verified by a Simulating a Testbench on *Altera-ModelSim*

### Wireless Reconfigurable Andon System with Maintenance Prediction:

An Andon System is a system in use in manufacture industries to flag problems. We equipped this with wireless datalogging, and maintenance prediction.

- Designed with *ESP32-S3-WROOM* chip
- Baremetal C coding with *ESP-IDF*
- Basic UI design with the visual IDE *Codux*, with further modifications done later
- Schematics and PCB Design using *Altium Designer*

**METROBAND — A Metronome Wristband:** An alternative to traditional metronome which aids musicians to keep to their tempo. The circuit was designed around an ESP32-S2 chip.

- Designed with *ESP32-S2-WROOM*
- Schematics and PCB Design done using *Altium Designer*

**Guitar Pedalboard:** This project aimed to create a set of amplifiers, which adds various audio effects to the audio. Among these effects were Overdrive, Fuzz, Tremolo and Wah. This was done as a fully analog project, using operational amplifiers.

- Simulations using *LTspice*
- Schematics and PCB Design using *Altium Designer*

**A Multitasking Robot:** This is an autonomous line follower robot, with abilities of collision avoidance, a mechanical arm able to pick up an object, colour detection, sound detection, detecting a moving guard robot, and avoiding it

- Designed with *Arduino MEGA 2560*

<b>COMPETITIONS</b>	<b>Uva Wellassa University Robot Battles 2.0 Death Race — Semifinalists:</b> The competition had around 50 teams manoeuvring a Remote Controlled Battlebots on several races across an outdoor path containing various obstacles such as ramps, saws, hammers and fire. <ul style="list-style-type: none"> <li>- Designed the PCB and the wiring system</li> <li>- Contributed in coding the RF communication part</li> </ul>
	<b>Microsoft ImagineCup: Project CrystalClear:</b> For this, we created a platform which consists of interactive exercises for Dyslexic patients (targeted mostly at kids). This included a finger-pose model evaluating the exercises. <ul style="list-style-type: none"> <li>- Contributed in UI design using <i>Codux</i></li> </ul>
	<b>Brainstorm'24: Project CrystalClear — Finalists (Ongoing)</b>
<b>COURSES AND CERTIFICATES</b>	<b>Idealize'24: SportSense (Ongoing):</b> For this, we created a mobile application which helps users to keep correct pose and form while doing their exercises. This included a stick-figure model evaluating these exercises. <ul style="list-style-type: none"> <li>- Contributed in UI design with <i>Android Studio</i></li> </ul>
	<b>Introduction to FPGA Design for Embedded Systems</b> University of Colorado Boulder (In Process)
	<b>Introduction to UVM</b> — Siemens Verification Academy (In Process) <b>Introduction to Embedded Machine Learning</b> — Edge Impulse <b>Introduction to Machine Learning</b> — Kaggle <b>Intermediate Machine Learning</b> — Kaggle <b>Introduction to Computer Vision</b> — Kaggle <b>MATLAB Onramp</b> — MathWorks
<b>TECHNICAL SKILLS</b>	<b>Hardware Design:</b> Verilog, SystemVerilog <b>Hardware Verification:</b> Testbench Design, UVM, Altera-Modelsim <b>Programming Languages:</b> Python, C, C++, MATLAB <b>Web Development:</b> HTML, CSS, JavaScript, TypeScript <b>Other Languages:</b> Bash, Git, LaTeX <b>Applications:</b> Xilinx Vivaldo, Intel Quartus, Verilator, Altium Designer, ESP-IDF, Visual Studio, Codux, Android Studio <b>Operating Systems:</b> Windows, Raspberry Pi OS, Android.
<b>SOFT SKILLS</b>	<b>Communication Skills</b> <ul style="list-style-type: none"> <li>• Language Skills           <ul style="list-style-type: none"> <li>– English — Bilingual proficiency</li> <li>– Sinhala — Native proficiency</li> </ul> </li> <li>• Presentation Skills           <ul style="list-style-type: none"> <li>– Was one of the presenters at the Mobitel Lab of the department during EXMO-2023 exhibition.</li> <li>– Presented Metroband—The metronome wristband at EXMO-2023</li> <li>– Have been a presenter in several other presentations</li> </ul> </li> </ul>
	<b>Leadership and Teamwork</b> <ul style="list-style-type: none"> <li>• Was the leader for a several group projects at the university.</li> <li>• Was the batch coordinator for the Mobitel Lab at the EXMO-24 exhibition</li> <li>• Was a part of the PR team of SLRC-2024</li> <li>• Been in the organising committees at the school events.</li> </ul>

<b>EXPERIENCE</b>	<b>Freelance PCB Designer</b>	<i>fvrr</i>
	May 2024 - Present - Designed and Developed Custom PCB Layouts for projects using <i>Altium Designer</i> - Communicated effectively with clients to understand project requirements	
	<b>Design Intern</b>	<i>Third Space Global - Sri Lanka</i>
	July 2022 - January 2023 - Created and Brainstormed promotional content, primarily focusing on 2D animations - Developed skills in visual design and storytelling	
<b>VOLUNTEERING AND CLUBS</b>	<b>After School</b>	
	PR & IT Director — Rotaract Club of Acheivers Lanka Business School Video Editor — Electronics Club Member of Association for Computer Machinery - University of Moratuwa Member of IEEE Student branch - University of Moratuwa Member of Classical Music Society - University of Moratuwa	2021/22 2023
	<b>During School</b>	
	President — Catholic and Christian Society of D.S. Senanayake College Co-organizer — Aeronautical Society of D.S. Senanayake College Co-organizer — Western Music Society of D.S. Senanayake College Member of Senior Boys' Choir of D.S. Senanayake College	2019 2019 2019
<b>INTERESTS</b>	Music — Guitar, Composing Sightseeing historical places Panel Shows — QI, Taskmaster, Would I Lie to You	