

Yasith Silva

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OBJECTIVE

I am a dedicated electronic engineering student, passionate in **Embedded Systems Design, Circuits Design, IoT Systems and Digital Systems Design**. As a team player with good leadership qualities, communication and presentation skills, and experience, I can adapt and learn quickly. I seek opportunities to contribute to the ever-evolving and exciting world of embedded systems, learning along the way.

EXPERIENCE

Trainee Associate Electronic Engineer

Zone24x7 (pvt) ltd

Dec 2024 - Jul 2025

- Worked on IoT, UWB localisation and Embedded System
- Coded firmware for multiple projects following industry standards
- Got hands on experience with complex embedded systems
- Developed presentation skills through student visits, client demonstrations

Course Instructor - Embedded Product Design for IoT

Skillsurf

Dec 2024 - May 2025

- Did sessions on schematic and PCB design

Freelance PCB Designer

fiverr

May 2024 - Present

- Designed and Developed Custom PCB Layouts for projects using *Altium Designer*
- Communicated effectively with clients to understand project requirements

Co-founder

Metronix

Jan 2025 - Present

- Looking into UI/UX design and marketing

EDUCATION

University of Moratuwa, Sri Lanka

BSc. (Hons) Engineering, Electronic and Telecommunication

CGPA: 3.65/4.00

May 2022 - Present

D.S. Senanayake College, Colombo 07, Sri Lanka

G.C.E. Advanced Level (Physics, Mathematics, Chemistry)

3As / z-score 2.21

2012 - 2020

Maris Stella College, Bolawalana - Negombo, Sri Lanka

2007 - 2012

TECHNICAL SKILLS

Skills: Embedded Systems Design, Circuit Design - Schematics and PCBs, Firmware development, Digital Systems Design, FPGA Implementation

Embedded Systems: Embedded C, Baremetal, FreeRTOS

Programming Languages: C/C++, Python, JavaScript

Circuit Design: High speed design, Multilayer Design, Hierarchical Schematic Design, Altium Designer, KiCad

Hardware Verification: Testbench Design, Altera-Modelsim

COURSES AND CERTIFICATES

Introduction to Embedded Machine Learning — Edge Impulse
FPGA Softcore Processors and IP Acquisition
University of Colorado Boulder
Hardware Description Languages for FPGA Designs
University of Colorado Boulder
Introduction to, Intermediate Machine Learning — Kaggle
MATLAB Onramp — MathWorks

PROJECTS

Chip-Aware Universal Evaluation Platform (Ongoing):

FYP. A universal platform that can be reconfigured to evaluate a range of ICs, including motor controllers, ADCs, DACs, and the software required for configuring, and an AI agent to convert the datasheets to configuration files and assist testing.

- Designing the schematics, PCB and firmware for the expansion kit for the FPGAs
 - containing an ADC, a DAC and other inputs and outputs for the device under test.
- Designing the test cases

METROBAND — A Metronome Wristband:

An alternative to the traditional metronome which aids musicians to keep to their tempo, using vibrations. The circuit was designed around an ESP32-S2 chip, communicates with the phone using Bluetooth.

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

Wireless Reconfigurable Andon System with Maintenance Prediction:

A System to flag problems in manufacturing lines. We equipped this with wireless data logging and maintenance prediction.

- Designed with *ESP32-S3-WROOM* chip
- Baremetal C coding with *ESP-IDF*
- Schematics and PCB Design using *Altium Designer*

A Task-Oriented 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*

EcoWatt - Energy Monitoring Gateway:

A microcontroller-based energy monitoring gateway simulating a solar inverter interface, designed with constrained uplink, remote configuration, security, and FOTA support.

- Wrote firmware for remote configuration
- Managed refactoring the code to abstraction layers and keeping in Mistra standards

Flood-level Sensing System for Detection and Prediction: A system with several sensors to sense the water level of a body, and a rain gauge to predict the water level, and sends the collected data from a close area to a central server.

- Designed with *ESP12-E* chip
- Uses *MQTT* over Wifi to communicate with the server
- Schematics and PCB Design using *KiCad*

32-bit RISC-V Processor:

This project requires us to create a 32-bit processor to support RISC-V.

- A single cycle processor designed first, and will be expanded to be pipelined
- Contains cache and branch prediction.
- Designed using *Verilog*

UART Transceiver using DE0-Nano FPGA Board:

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

- Implemented on an *DE0-Nano* FPGA Board
- Design verified by a Simulating a Testbench on *Altera-ModelSim*

Guitar Pedalboard:

This project aimed to create a set of fx pedals such as Overdrive, Fuzz, Tremolo and Wah. This was done as a fully analogue project, using operational amplifiers.

- PCB Design using *Altium Designer*
- Assembled and soldered the components

COMPETITIONS VRCade 2.0 (Winners)

Signify — A text-to-sign language application for ease of communication for hearing impaired, designed for an AR glass, and a customized lightweight AR glass able to specifically run the AR application.

- Designed and customized the PCB for the AR Glass

DVCon2025 India (First Runners Up)

A Custom Hardware Accelerator for U-Net — An accelerator for image segmentation using U-Net for Autonomous Driving Applications. This is to be integrated with the VEGA AT1051 - 32bit CPU IP core, running on a Genesys-2 board.

- Made the U-Net IP

Idealize'24 (First Runners Up)

Spark Challenge 2023/24 (Finalists)

SportSense — A mobile app that helps users to keep correct poses and forms while doing their exercises using a body pose landmark identification model.

- Contributed in UI/UX design with *Android Studio*

Brainstorm'24 (Finalists)

Project CrystalClear — A platform that consists of interactive exercises for Dyslexic patients using a finger-pose model evaluation.

- Contributed in UI design using *Codux*

Uva Wellassa University Robot Battles 2.0 Death Race (Semifinalists)

A Remote Controlled Battlebot on several races across an outdoor path containing various obstacles such as ramps, saws, hammers and fire.

- Designed the PCB and the wiring system
- Contributed in coding the RF communication part

SOFT SKILLS

Communication Skills

- Language Skills
 - English — Bilingual proficiency
 - Sinhala — Native proficiency
- Presentation Skills
 - An active member of the Zone24x7 Toastmasters Club
 - Presented company projects at Zone24x7 at multiple student visits and in client demonstrations
 - Was one of the presenters at the Mobitel Lab of the department during the EXMO-2023 exhibition.
 - Presented Metroband—The metronome wristband at EXMO-2023
 - Have been a presenter in several other project presentations and in competitions

Leadership and Teamwork

- Was the leader of several group projects at the university.
- Was a batch coordinator for the Mobitel Lab at the EXMO-24 exhibition
- Was a part of the PR team of SLRC-2024
- Was one of the PR-IT Directors at the Rotaract Club of Achievers Lanka Business School for 2021/22
- Been on the organising committees at the school events.

VOLUTEERING AND CLUBS

PR & IT Director — Rotaract Club of Acheivers Lanka Business School	2021/22
Video Editor — Electronics Club	2023
Member of Zone24x7 Toastmasters 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	

During School

President — Catholic and Christian Society of D.S. Senanayake College	2019
Co-organizer — Aeronautical Society of D.S. Senanayake College	2019
Co-organizer — Western Music Society of D.S. Senanayake College	2019
Member of Senior Boys' Choir of D.S. Senanayake College	

REFERENCES

Dr. Ajith Pasqual *Ph.D. (Tokyo)*

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