Yasith Silva

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OBJECTIVE

I am a dedicated electronic engineering student, passionate in **Embedded Systems Design, Digital Systems Design and Processor Architecture**. 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.

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
G.C.E. Ordinary Level   9As
2012 - 2020

Maris Stella College, Bolawalana - Negombo, Sri Lanka
2007 - 2012

TECHNICAL SKILLS

Skills: Embedded Systems Design, Circuit Design, Firmware development, Digital Systems Design, FPGA Implementation

Embedded Systems: Embedded C, Baremetal, FreeRTOS
Programming Languages: C/C++, Python
Hardware Design Languages: Verilog, SystemVerilog
Hardware Verification: Testbench Design, Altera-Modelsim

Applications: ESP-IDF, Altium Designer, Xilinx Vivaldo, Intel Quartus, Verilator, Visual Studio, Codux, Android Studio

Relevant Coursework: Embedded Systems Engineering, Embedded Systems Applications, Electronic Design Realisation, Advanced Digital Systems, Digital IC Design, Digital Systems Design, Fundamentals of Computer Organisation, Data Structures and Algorithms

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 FPGA Design for Embedded Systems
University of Colorado Boulder
Introduction to Machine Learning — Kaggle
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 evaluation boards, expansion kits for the FPGAs
- Designing the test cases

Wireless Reconfigurable Andon System with Maintenace 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*

METROBAND — A Metronome Wristband:
An alternative to the 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*

32-bit Single Precision Floating Point ALU:
This project aims to create a 32-bit ALU for single precision floating point numbers,
capable of addition subtraction and multiplication.
- To be implemented on a *DE2-115* FPGA board
- Designed using *Verilog*

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 chache and branch prediction.
- Designed using *Verilog*

UART Transceiver using DE0-Nano FPGA Board:
UART Transceiver, communicating between two FPGA Boards. The design was mod-
ified to control a series of LEDs on each board from the other.
- Implemented on an *DE0-Nano* FPGA Board
- Designed using *Verilog*
- Design verified by a Simulating a Testbench on *Altera-ModelSim*

A Task-Oriented Robot:
This is an autonomous line follower robot, with abilities of collision avoidance, a me-
chanical arm able to pick up an object, colour detection, sound detection, detecting a
moving guard robot, and avoiding it
- Designed with *Arduino MEGA 2560*

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.
- Schematics and PCB Design using *Altium Designer*

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.
- 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
  - 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.

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 2024 - Present
- Looking into Electronics developments and UI/UX design

VOLUTEERING AND CLUBS

After School

PR & IT Director — Rotaract Club of Acheivers Lanka Business School   2021/22
Video Editor — Electronics Club   2023
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. Subodha Charles *Ph.D. (Florida)*
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