

Hiruna Vidumina

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PROFILE

A dedicated, responsible, hardworking individual who hopes to utilize his own skills, capabilities, knowledge, and experience in achieving organizational goals as an adaptable team player. A personality with a positive attitude, good communication skills, the readiness to accept challenges, and the passion to dig deep into something with high interest in the telecommunications, cyber security, Internet of things, and networking-related areas.

WORK EXPERIENCE

Huawei Technologies Lanka Co. (Pvt) Ltd

Colombo, Sri Lanka

Trainee Telecommunication Engineer

Jan 2022 – Jun 2022

- Worked on the Sri Lanka Bharti Airtel LTE Rollout Plan project, learning concepts related to wireless communications.
- Learned the basic concepts related to GSM, UMTS, LTE, and NR including their architectures.
- Engaged with India and China Global Support Center engineers to formulate RF optimization suggestions.
- Hands-on experience with software like Google Earth Pro, U2020, TEMS Discovery, PHU Smart, and GeneX Assistant.
- Familiarized with the associated processes of SSV, like drive testing, KPI monitoring, and BTS installation in sites.
- Subcontractor coordination and supervision to achieve weekly SSV targets.
- Participated in training sessions conducted on RF planning and elements associated with BTS through site visits.

Department of Electronic and Telecommunication Eng, University of Moratuwa

Moratuwa, Sri Lanka

Visiting Instructor

Oct 2022 – Feb 2023

- Instructed and supervised the laboratory practicals conducted in digital and analog electronics and laboratory projects for semester 3 students under the module “EN2091 : Laboratory Practice and Projects.”

EDUCATION

University of Moratuwa

Moratuwa, Sri Lanka

B.Sc. Eng. Hons. in Electronic and Telecommunication Engineering; CGPA: 3.84

Nov 2018 – Jun 2023 (Expected)

Dean's List Performance: Semester 1, 4, 5, and 6

Rajapaksha Central College

Weeraketiya, Sri Lanka

GCE Advanced Level Examination; 2-A passes and 1-B pass Z-Score: 1.8894

Mar 2015 – Aug 2017

GCE Ordinary Level Examination; 9-A passes

Jan 2009 – Dec 2014

AWARDS & ACHIEVEMENTS

Huawei ICT Competition Asia Pacific 2021-2022 : Ranked 4th in the network track among more than 300 candidates.

Synopsys Coding Challenge 2021 : Awarded the runner-up certificate by Synopsis Lanka (Pvt.) Ltd.

National Mathematics Olympiad Competition 2014 : Participated under category III.

Junior Mathematics and Science Olympiad Competition 2009 : Represented the Southern provincial pool.

SKILLS

Programming: Python, MATLAB, C, C++, Java, Dart, Verilog

Hardware Technologies: Raspberry Pi, Arduino, NodeMCU (ESP8266), FPGA

Frameworks: OpenCV, TensorFlow, Keras, Pandas

Tools: VS Code, PyCharm, Solidworks, LT Spice, Multisim, Altium Designer, Orcad, Flutter, Microsoft Office, LaTeX

Languages: Sinhala, English

Soft skills: Problem-solving, Teamwork, Leadership, Adaptability, Fast learning ability, Time and resource management, Collaboration, Flexibility

PROJECTS

V2V Communication for Augmented Driving | *FYP* Team of 4 - [Sumo, OMNeT++, Flutter] Sep 2022 - Present

- A vehicle-to-vehicle information sharing method based on DSRC that promotes efficient and safe driving by assisting in lane change and overtaking scenarios, as well as alerting on emergency vehicles and accidents ahead. Communication among vehicles is designed and implemented by establishing a mobile ad hoc network using DSRC-enabled MK5 OBUs. A user-friendly interface is being developed through which drivers can be directly notified of any alert regarding provided functions.

Processor Design |

Team of 4 - [Vivado, Python, OpenCV] Mar 2022 - Jun 2022

- The project is a detailed discussion of the design of a custom processor that was purposely designed for filtering an input image and downsampling the image by a specific factor. Suitable instruction set architectures and micro-instructions were included.

Automatic Light and Security System |

Team of 10 - [Solidworks, Easy EDA] Feb 2022 - May 2022

- An automatic light and security system was implemented that can automatically switch on a bulb and sound an alarm when someone enters through a door or a gate with the use of motion sensors. Functionality and configurability are improved by introducing several additional features that are available with the use of a remote controller. Designing PCBs and enclosures to meet industrial expectations was highlighted in this project.

News Classification System |

Team of 3 - [Arduino, Node MCU, Node-RED, HTML] Jun 2021 - Jul 2021

- An innovative IoT application that classifies the news items received from an external open-source API according to the user's preferences and sends them to the user's mobile device using IoT standards, technologies, and tools. The principles related to Node-RED, MQTT, Arduino, and HTML were used here.

Filter Design |

Individual - [MATLAB] Apr 2021 - May 2021

- A non-recursive, finite-duration impulse response (FIR) bandpass filter was designed according to the prescribed specifications using the windowing method in conjunction with the Kaiser window. The filter was validated by using purposely created three sinusoids.

High-Frequency Amplifier |

Team of 4 - [NI Multisim, Altium, Solidworks] Jun 2020 - Jul 2020

- A high-frequency, two-stage cascaded amplifier was designed and implemented using transistors (without op-amps) that can drive a headphone under the given specifications without causing any distortion to the output signal. This was created to amplify a small signal in the frequency range 20 kHz–200 kHz.

Line and Wall Following Robot |

Team of 4 - [Atmel Studio, Orcad] Dec 2019 - Feb 2020

- A complete autonomous robot was designed with the use of an ATMEGA32A microcontroller, which tracks the line and avoids walls in the path. All the programming was done with Atmel Studio 7.0.

Yagi-Uda Antenna Array |

Individual - [MATLAB] Jan 2020 - Feb 2020

- This is a MATLAB demonstration of how to design, construct, and test the Yagi antenna for the TV reception of a given channel. The action of a folded half-wave dipole with and without the presence of reflectors and directors was modeled.

INTERESTS

Telecommunication | Cyber Security | Internet of Things | Networking | Mathematics | Machine Learning | Programming | Data Science | Data Structures and Algorithms | Image Processing

CERTIFICATES

HCIA Datacom V1.0 Course |

Mar 2022

Data communication network basis, IP routing, Ethernet switching, VLAN, IPv6, SDN, and NFV

“InnovMind” Workshop series on IoT - Participation Certificate |

Sep 2021

Conducted by IEEE Industry Application Society of SLTC

Machine Learning |

Aug 2020

Offered by Stanford University on Coursera

VOLUNTEERING AND MEMBERSHIPS

K. K. Y. W. Perera Mobile Communications Laboratory

Dec 2022 – Present

Lab Administrator

Institute of Engineers Sri Lanka (IESL)

Jul 2021 – Present

Student Member (S - 28020)

E-Club, University of Moratuwa

Sep 2019 – Present

Member

μMora Inter University All-island Mathematics Competition - 2020

May 2020

Member of Organizing Committee

“Soyuru Sathkaraya - 2019” - Ordinary Level Seminar Series - 2019

Jan 2019 – Mar 2019

District Representative

REFERENCES

Prof. (Mrs.) Dileeka Dias,
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