

Nidharshan Vigneshwaram

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About

CSE undergraduate specializing in Integrated Computer Engineering, with hands-on project experience in ROS, embedded systems, Software Engineering and reinforcement learning.

Education

University of Moratuwa (UOM) *Mar 2024 – Present*
B.Sc. Engineering (Hons), Computer Science and Engineering
Specialization: Integrated Computer Engineering CGPA : 3.33

T/Orr'shill Vivekananda College, Trincomalee *2020 – 2022*
G.C.E. Advanced Level – Z-Score: 2.5743, Island Rank: 163

Projects

Reinforcement Learning-Based Sim-to-Real Framework *Ongoing*

- Building a framework to transfer RL policies trained in simulation to real-world robot control, focusing on controller robustness.
- Tech: Reinforcement Learning, Python, MuJoCo
- github.com/RoboticGen/sim2real-framework

Robot Control Platform – Kobuki Robot

- Built a navigation and localization system for the Kobuki robot with LiDAR, SLAM, and a web interface for live control and monitoring.
- Bridged low-level robot control to a browser-based interface via rosbridge, giving operators live telemetry and control with minimal latency.
- Tech: ROS2, rosbridge, React (JavaScript), Python, RViz
- github.com/IntellisenseLab/final-project-tk_botz

Trash2Treasure – AI-based Waste Management System

- Developed a full-stack AI-based waste management system as part of the Devthon competition.
- Tech: TypeScript, NestJS, Prisma, Next.js, PostgreSQL, Docker
- github.com/krish-anu/Devthon

CrimePulse – Anonymous Crime Reporting Platform

- Developed a platform that allows users to report crimes anonymously with heatmaps and an admin dashboard.
- Tech: Ballerina, MongoDB, React, TypeScript
- github.com/Ruththra/iwb25-259-disco_bytes

Bank Management System

- Developed a database-driven bank and microfinance management platform for customers, accounts, and transactions.
- Tech: Laravel (PHP), SQL / SQLite
- github.com/SuhasDissa/MIMS-Database-Project

4-Bit Nano Processor

- Designed and implemented a 4-bit processor from scratch in VHDL, deployed on a Basys3 FPGA board via Vivado.
- github.com/NidharVignesh/Nano-Processor-CS-1050

Achievements

- **Champion** – Devthon Web Development Competition
- Finalist – IEEE Xtreme 2025 (Competitive Problem Solving)
- Finalist – Mora Xtreme 2025 (Competitive Problem Solving-UOM)
- Finalist – UOJ Coders (Competitive Problem Solving-UOJ)
- Finalist – CodeRally (Competitive Problem Solving-IIT)
- Participant – SpritX, Idealize (AIESEC), Ballerina Hackathon (WSO2)

Leadership & Volunteering

- **Department Representative**, 2026/2027
- Logistics Lead, Career Fair 2025/26
- Member, Trincomalee District University Students' Association
- Member, IEEE ComSoc Student Branch
- Logistics Committee - Robo Games 25/26, SLIOT 25/26 , Hit the Grounds

Certifications

Advanced Certificate in English for Professional Communication – Open University, Kandy, Sri Lanka (2023)

References

Dr. Kutila Gunasekera

Senior Lecturer

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University of Moratuwa, Sri Lanka

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Dr. Sulochana Sooriyaarachchi

Senior Lecturer

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