

Thanushanth Kanagarajah

📍 Jaffna, Sri Lanka ✉ thanushanth.20@cse.mrt.ac.lk ☎ 0767690673 in kanagarajah-thanushanth
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Education

BSc Engineering	University of Moratuwa , Computer Science and Engineering • GPA: 3.34/4.0	Jan 2021 – Present
Advance Level	Jaffna Hindu College , Physical Science • Z Score: 2.6735 Island rank: 96 • Combined maths: A Physics: A Chemistry: A	Jan 2017 – Aug 2019

Experience

Ackcio , Embedded Software Engineer Intern	Singapore, SG Dec 2023 – Jul 2024
<ul style="list-style-type: none"> Integrated Modbus TCP protocol for efficient data communication in embedded systems Managed and optimized network configurations, including Wi-Fi, cellular, LAN, and hotspot connectivity; automated APN selection to enhance network performance. Analyzed and optimized the battery performance of IoT devices under varying temperature conditions to extend device lifetime. Technology stack: Python, TypeScript, C, Jira, BidBucket, raspberry pi 	
Viso , Software Engineer	Colombo, SL Jan 2023 – Jun 2023
<ul style="list-style-type: none"> Designed and developed databases using MySQL and MongoDB to ensure efficient data storage and retrieval Built and maintained backend applications using Node.js, enhancing server-side functionality and performance Lead and coordinated team efforts to achieve project milestones and deliverables Technology stack: Node.js, MySql, MongoDB, Postman API 	
Teaching Assistant , Computer Architecture Module	University of Moratuwa, SL Jun 2024 - Nov 2024
<ul style="list-style-type: none"> Assist in teaching the Computer Architecture module, providing support to students in understanding course material and lab work. Facilitate discussions, hold office hours, and assist in grading assignments and exams. 	

Projects


Life Saver	Jul 2023 – Nov 2023 ife-saver.git 
<ul style="list-style-type: none"> Lead the team in developing a life-saving emergency assistance web application that provides instant alerts to nearby hospitals and ambulance services at the press of a button. Implemented a medical chatbot to provide immediate guidance and integrated Google Maps for real-time location tracking. Responsibilities included database management, back-end development, Google Maps integration, deployment, and front-end development. Technology Stack: Node.js, MySQL, React.js, Google Maps, Rasa, WebSocket. Deployment Platforms: Microsoft Azure, Heroku, Vercel, Postman API. 	
Account Management	Apr 2023 – Aug 2023 Account-Management.git 
<ul style="list-style-type: none"> Lead a team in developing a shop account management system that tracks ex- 	

penses, incomes, and loans. Collaborated on building a comprehensive platform for generating reports and efficiently managing shop accounts.

- Responsibilities included back-end development and database management to ensure seamless data handling and retrieval.
- Technology Stack: Node.js, MySQL, React.js, Postman API.


Autonomous Indoor Gardening

- Developed an innovative autonomous indoor gardening system that manages temperature, watering, and power failure issues to optimize conditions for plant growth.
- Technology Stack and Hardware: Node.js, React.js, Arduino IDE, C++, ESP-32, Arduino, Soil Sensor, Moisture Sensor, Temperature Sensor.

Aug 2023 – Jan 2024
[Autonomous-Indoor-Garden.git](#) 


Smart Agriculture

- Lead a team in showcasing an innovative solution at EXMO, Sri Lanka's largest exhibition, featuring soil sensors capturing data sent via drones to a server.
- Integrated diverse communication protocols such as Bluetooth, Wi-Fi, LoRa, NB-IoT, and MQTT for real-time soil data collection.
- Technology Stack and Hardware: Node-RED, Arduino IDE, C++, ESP-32, Arduino, Soil Sensor, LoRa Module, NB-IoT Module.

May 2023 – Jul 2023
[Smart-Agriculture.git](#) 

Nano Processor Design in Vivado

- Lead the creation of a nano processor using Vivado software to implement hardware design capable of executing a set of instructions.
- Technology: Vivado.

Jan 2022 – Jul 2022
[Nano-Processor.git](#) 

Achievements

Idealize - Finalist	2023
IEEE R10 Robotics - Second Runner-up	2023
Hackforce'22 - Second Runner-up	2022
SLRC - Participation	2023

Volunteering

Organizing Committee Member, IESL Robogames 2023	2023
<ul style="list-style-type: none">• Contributed to the organization of the event under the Computer Science and Engineering Department, University of Moratuwa.	
Exam Coordinator, Mora Exams 2022	2022
<ul style="list-style-type: none">• Coordinated exam processes for Mora E-Tamils at the University of Moratuwa.	
President, Science Union	2018
<ul style="list-style-type: none">• Led the Science Union at Jaffna Hindu College, promoting scientific engagement among students.	
Vice President, Drama Society	2016
<ul style="list-style-type: none">• Assisted in managing activities and productions for the Drama Society at Jaffna Hindu College.	

Technologies

Programming Languages: Python, JavaScript, C++, C, Java, MySQL, mongodb, Vivado-VHDL

Technologies: Node.js, Embedded Systems, AWS, Docker

Hardware: Arduino, Raspberry Pi, Esp32

Tools: Git, GitHub, Jira