Thanushanth Kanagarajah

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Education

BSc Engineering	**University of Moratuwa**, Computer Science and Engineering	Jan 2021 – Present

- GPA: 3.34/4.0

Advance Level	**Jaffna Hindu College**, Physical Science	Jan 2017 – Aug 2019

- Z Score: 2.6735   Island rank: 96
- Combinedmaths: A   Physics: A   Chemistry: A

Experience

Embedded Software Engineer Intern   Singapore, SG
Ackcio(Pvt)Ltd   Dec 2023 – Jul 2024

- 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 devices under varying temperature to extend device lifetime.
- Technology stack: Python, TypeScript, C, Jira, BidBucket, raspberry pi

Software Engineer   Colombo, SL
Viso   Jan 2023 – Jun 2023

- 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

Computer Architecture Module   University of Moratuwa, SL
Teaching Assistant   Jun 2024 - Nov 2024

- 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

Self explainable IMU Sensor-based Human Activity Recognition (FYP)   Jul 2024 – Present

- Self-Explainable Human Activity Recognition based on IMU data on building a deep learning classification model.
- Generating explanations for model decisions where model itself provides understandable explanations.
- Technology Stack: Python

Life Serve ↗   Jul 2023 – Nov 2023

- 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.
- Responsibilities included database management, back-end development, Google Maps integration and deployment.
- 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

- Lead a team in developing a shop account management system that tracks expenses, incomes, and loans. 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.
- Technology Stack: Node.js, MySQL, React.js, Postman API

Smart Agriculture ↗   May 2023 – Jul 2023

- Showcasing an innovative solution at EXMO, 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 and Hardware: Node-RED, Arduino IDE, C++, ESP-32, Arduino, Soil Sensor, LoRa Module, NB-IoT Module

Full Supply Chain Management ↗   Nov 2022 – Jan 2023

- Lead the development of a user-friendly application to enhance customers' buying and selling experience.
- Focused on database management and back-end development while contributing to front-end development tasks.
- Technology Stack: Node.js, MySQL, Postman API, React.js

Nano Processor Design in Vivado ↗   Jan 2022 – Jul 2022

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

Email Client using SMTP through Java ↗   Jan 2022 – Jul 2022

- Developed a simple email client using Java, adhering to object-oriented programming principles and utilizing the SMTP protocol with Javax.mail API.
- Technology: Java

Achievements

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

Volunteering

Organizing Committee Member, IESL Robogames 2023   2023

- Contributed to the organization of the event under the CSE Department, University of Moratuwa.

Exam Coordinator, Mora Exams 2022   2022

- Coordinated exam processes for Mora E-Tamils at the University of Moratuwa.

President, Science Union   2018

- Lead the Science Union at Jaffna Hindu College, promoting scientific engagement among students.

Vice President, Drama Society   2016

- Assisted in managing activities and productions for the Drama Society at Jaffna Hindu College.

Technologies

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

Frameworks: Node.js, express, Flask

Databases: MySQL, mongodb

Technologies: AWS, Docker

Hardware: Arduino, Raspberry Pi, Esp32

Tools: REST, Git, GitHub, Jira, HTML, CSS, Postman

References

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