

Thilan Dissanayaka

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Summary

Final year Engineering undergraduate with a strong background in computer science and over 10 years experience in software development. Interested in Web development, Cyber security, exploitation techniques, Malware analysis, computer architecture, blockchain development, computer networking, and Linux.

Skills

- Programming Languages: JavaScript, Python, Java, C, C++ , Assembly, Ballerina, Dart, Solidity
- Front-end Development: React, Next, Tailwind CSS.
- Back-end development: Node.js Nest.js, Express.js, PHP, CodeIgnitor, Larval.
- Databases: SQL, MongoDB
- Mobile development: React native, Flutter, Android studio.
- DevOps: Linux administration, CI/CD, Docker, Jenkins, Computer networking.
- Tools and technologies: Git, Jira, Figma, Agile development.
- Malware analysis, Web application security, System exploitation, Exploit development and Shell-coding, Reverse Engineering.
- Embedded system development, computer architecture, Linux development.
- Block-chain development, Cryptocurrency, NFT, Smart contract, and DApps development.
- Algorithm design, Software architecture , Project planning and management, and Strong communication skills.

Education

University of Ruhuna, BSc (Hons) in Electrical and Information Engineering Sept 2021 – Sept 2024

- **Related coursework:** Software project, Web development, Image processing, Information security, Marching learning, Computer Architecture, Data structures and Algorithms, Design patterns, Operating System programming, High performance computing, GUI development, Embedded Systems, Object Oriented Programming, Databases.

Experience

Software Engineer, Eminence Apps (Pvt.) Ltd Jan 2024 - Present

- Developed a multi-shop supported POS system with MERN stack (pos.eminenceapps.com)
- Built a mobile application with Flutter, React, and Nest.js for an overseas client, which is a social media platform.

Software Engineer, Aldtan (Pvt.) Ltd. Oct 2023 – Jan 2024

- Actively engaged in a government project called Passenger Vehicle Permit Gateway of Southern Province which was a web application built with Nest.js and Vue.js.
- Contributed to the back-end REST API development, CI/CD pipeline setup, and the deployment of the project.

Freelance software developer 2012 – 2023

- Developed commercial software including POS systems, Inventory management systems, HRM portals, Food ordering systems, School management systems.
- Experienced in integration of Payment gateways, OAuth systems , SMS gateways etc.

Software Engineer, Intern, SLT Digital Labs Nov 2023 – Jan 2024

- Contributed to an ongoing project called SmartAgro which is an agricultural dashboard for land owners. The used technologies were React.js, Node.js, and the MQTT protocol.
- Developed a similar tool to Node-Red which is a sensor data collecting framework using Node.Js

Projects and Research

CPU Simulation Software

- A research project focusing on simulating the entire computer CPU and memory areas such as Stack, Heap, etc.
- Capable of executing Intel assembly instructions on the CPU and examining the memory.
- Tools Used: React.js, Tailwind, GDB

LECO AI-enabled Smart Grid Project

- Project in collaboration with LECO and the University of Ruhuna, funded by ADB.
- Actively contributed to the meter programming and server communication part.
- Tools Used: Embedded C, Nuvoton M031, Quectel BC92, DLMS protocol, TCP, MongoDB

Blockchain-based Real Estate Marketing Platform

- FYP project targeted to develop a blockchain and cryptocurrency-based marketing platform for real estate.
- Blockchain is written in C++ and used solidity to write the smart contracts .
- Technologies: Web3.js, C++, Ethereum, ERC720, ERC20, React.js, Flutter, Solidity.

Other projects

- Developed management software for Miracle mine teddy bare factory, IGrid (Pvt) Ltd, NSteel (Pvt) Ltd.
- Complete web based LMS for DWT (Pvt) Ltd using react.js and Nest.js.
- Food ordering application for PizzaDen with MERN stack and Flutter.
- Front-End development framework based on React.js and Tailwind.css with a component library, Form handling, validation support, etc.

Publications

Design and Implementation of a Web-Based CPU Simulator Jul 2024
Kushan Sudeera, *Thilan Dissanayaka*

Blockchain based Real Estate marketplace Jun 2024
Thilan Dissanayaka, Manjitha Marasinghe, Sashiprabha Mihihansi

Competitions

- Won 2nd place from Sri Lanka at the IEEE R10 robotic competition.
- Participated in the Xbotix robotic competition, IEEE Extreme programming competition and IEEE Electronic Design Competition.

Extracurricular Activities

- Worked as a student instructor at Faculty of Engineering, University of Ruhuna.
- Chairman of the IEEE Computer Society, University of Ruhuna.
- Conducted workshops at the University on Matlab, cyber security, web application security, and cryptography.
- Organized Haxtreme, Eminence, RedCypher, HacDoze, DevExpert, and Axiom events.

References

Dr. Rajitha Udawalpola

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