



HASHAN RAJAKARUNA

SOFTWARE ENGINEER

CONTACT

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- [Hashan Rajakaruna](#)
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- Kandy, Sri Lanka

TECHNICAL SKILLS

Programming Languages

- Python
- C
- C++
- Java
- JavaScript
- TypeScript
- PHP

Backend Frameworks

- Node.js / Express.js
- NestJS
- Laravel
- Ballerina

Frontend Frameworks

- React
- Next.js
- Tailwind CSS
- Ant Design
- HTML

Databases

- MySQL
- MongoDB
- PostgreSQL
- MS SQL

Other Technical Skills

- IoT & Embedded Systems
- Version Control (Git, GitHub)
- Authentication, Secure APIs
- Cloud Platforms (Firebase, Vercel, Netlify)

PROFILE

Enthusiastic Information Technology undergraduate with expertise in Full-Stack Development, IoT, and robotics, plus a foundation in cybersecurity. Skilled in building scalable web apps and integrating hardware-software solutions. Passionate about modern software engineering, secure coding, and real-world innovation as a Full-Stack Developer or Software Engineer.

EDUCATION

University of Moratuwa (2023 - Present)
Faculty of Information Technology
BSc (Hons.) Information Technology & Management
CGPA: 3.50 (up to 4th semester)

St. Sylvester's College- Kandy (2012 - 2021)
G.C.E Advanced Level (2021)
Physical Science Stream

PROJECTS

- EmpSync | Employee Management System** 2025 JAN - 2025 JULY
(Second Year Software Project)
Full Stack Developer | Associated with UoM
 - Built a full-stack enterprise app integrating employee management, payroll, and food ordering with biometric authentication.
 - Designed a scalable, multi-tenant system with role-based access control and real-time frontend-IoT communication.
 - Implemented fingerprint login by connecting React apps to ESP32 and R307 sensors via the Web Bluetooth API.
 - A fingerprint unit has been created that can be directly connected to any OS without installing drivers. [LIVE PROJECT](#) [GITHUB REPO](#)**Technologies : ReactJS, NestJS, PostgreSQL, Prisma (ORM), BLE**
- Decentralized Transparent Governance Platform** 2025 JULY - 2025 SEPT
Full Stack Developer | Associated with Innovate with Ballerina (WSO2)
 - Built a full-stack blockchain platform to improve government transparency and citizen engagement.
 - Implemented democratic voting, petitions, whistleblowing, policy management, and spending tracking as core features.
 - Designed a Ballerina-based microservice architecture, separating blockchain logic from application logic for scalability and reliability.
 - Optimized inter-service communication with Ballerina, enabling reliable data flow and seamless integration between blockchain services and application modules. [LIVE PROJECT](#) [GITHUB REPO](#)**Technologies : Next.js, Node.js, PostgreSQL, Solidity, Ballerina, Asgardeo**

SOFT SKILLS

- Problem Solving
- Coordination Critical
- Thinking Team Work
- Leadership
- Time Management

CERTIFICATES

Official ISC2 CC Completion Certificate
ISC2 | 2024

Google Cybersecurity Specialization
Google | 2023 | Coursera

CODL Certified - Full-stack Development Certificates
University of Moratuwa | 2022

Internet of Things (IOT) Specialization
University of California | Coursera

ACHIEVEMENTS

Champions - Innovative with Ballerina - 2025

Organized by WSO2 & IEEE Computer Society - University of Moratuwa Student Branch
Oct 2025

2nd Runners-Up - InnovateX: University Edition Hackathon - 2025

Organized by Zebra Technologies
Oct 2025

Finalist - Sri Lanka Arduino Challenge - 2025

IEEE Challenge Sphere 2025
Sri Lanka Technological Campus IEEE
Jul 2025

Semifinalist - IESL Robo Games University Category - 2024

Organized by Institution of Engineers Sri Lanka (IESL) & Department of Computer Science and Engineering, University of Moratuwa
Jan 2025

EXTRA CURRICULAR

Visharadha in Indian Classical Music

Bhatkhande Sangit Vidyapith
(Lucknow, India)
2015 - 2018

PROJECTS (CONT.)

○ Autonomous Maze Navigation Robot

2024 SEP- 2024 DEC

Python Developer | Associated with UoM

- Competed in RoboGames 2024, advancing to the semi-finals with an autonomous maze-solving robot.
- Developed Python programs for the E-puck robot, enabling waypoint navigation and obstacle handling.
- Utilized the Webots simulator for testing, validation, and fine-tuning robot behavior.
- Implemented advanced pathfinding algorithms, ensuring accurate autonomous movement and stopping at colored waypoints.

[PROJECT DEMO](#) [GITHUB REPO](#)

Technologies : Python, Webots Simulator, Robotics Algorithms

○ Pharmacy Queue Management System

2025 FEB - 2025 APR

Full Stack Developer | Associated with UoM

- The Pharmacy Queue Management System is a MERN stack web application designed to optimize daily pharmacy operations. It automates order number assignments, facilitates real-time order tracking, and provides status updates (completed or canceled) directly from the counter. Tailored for small and medium-sized enterprises (SMEs), it enhances efficiency and customer service.

[LIVE PROJECT](#) [GITHUB REPO](#)

Technologies : React,NodeJS, Firebase Authentication, MongoDB

○ Fast Line Following Car - NDT Dextron Competition

2024 AUG - 2024 SEP

Associated with UoM

- Engineered an autonomous robot for a line-following competition. Designed control systems and algorithms to detect and follow lines with high accuracy. Integrated sensors for real-time navigation and tested reliability in a competitive environment.

[PROJECT DEMO](#) [GITHUB REPO](#)

Technologies : C++, Arduino, Embedded Systems, Control Algorithms (PID Controller).

○ Automated Acid Dilution System

2023 FIRST YEAR

(First Year Hardware Project)

Associated with UoM

- Designed and implemented a safety-focused microcontroller-based system to automate acid dilution in laboratories. Integrated ToF, gyroscope, ultrasonic, and temperature sensors for real-time safety and measurement. Developed an emergency shutdown mechanism and a user-friendly interface using a keypad and LCD screen.

[PROJECT DEMO](#) [GITHUB REPO](#)

Technologies : C++, ArduinoIDE

REFERENCE

Prof. (Mrs.) Thanuja C. Sandanayake
(PhD, MPhil, BSc)

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