

Chamodi Karunarathne

Software Engineering Intern

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📄 Chamodi-Karunarathne

🌐 in/chamodikaru



ABOUT ME

Information Technology and Management undergraduate at the University of Moratuwa, focused on full-stack engineering and systems design using Java, Next.js, React. Passionate about blending robust backend logic with creative, high-end UI/UX prototyping. Balancing strong academic principles with hands-on experience in requirements engineering and IoT frameworks to build highly optimized, out-of-the-box digital solutions.

EDUCATION

BSc. (Hons) Information Technology & Management

2024 – Present

Faculty of IT, University of Moratuwa

- **CGPA:** 3.78 / 4.00
- **Academic Honors:** Included in the Dean's List for Semester 01

G.C.E. Advanced Level, Devi Balika Vidyalyaya, Colombo 08

2020 – 2023

- 2022(2023) - Commerce Stream (English Medium)

TECHNICAL SKILLS

Languages: Typescript, JavaScript, Java, C, C++, SQL, Python

Frameworks & Libraries: Tailwind CSS, Next.js, React, Node.js, REST APIs

Databases & ORMs: MySQL, PostgreSQL, Drizzle, Firebase Realtime DB, Neon

DevOps Tools: Git, Github, Docker, Vercel, Expo

Hardware Platforms: ESP32, Arduino, PCB Design (EasyEDA)

PROJECTS

Enterprise IT Asset Management System (EITAMS)

11/2025 – Present

Full-Stack Software Developer

- Built a scalable, enterprise-grade Next.js/React asset registry featuring complex data grids, real-time synchronization, and automated PDF tag generation.
- Designed relational databases with Drizzle ORM (PostgreSQL/MySQL) to securely manage bulk asset transfers, reporting, and NextAuth role-based access.
- Improved codebase maintainability by refactoring monolithic UI files into modular React hooks while collaborating in an Agile team environment.
- **Tech Stack:** Next.js, React, TypeScript, Tailwind CSS, PostgreSQL, Drizzle ORM

Skyforge - Environmental Monitoring Drone & Real-Time Dashboard

12/2024 – 08/2025

PCB Designer & Frontend Developer

- Designed a custom EasyEDA PCB for an ESP32-based environmental monitoring drone, integrating sensors and communication modules.
- Developed a responsive React dashboard with Firebase Realtime Database integration for real-time environmental and flight telemetry monitoring.
- Built interactive data visualizations for weather parameters, GPS, altitude, air quality, and flight status.
- **Tech Stack:** React, TypeScript, Tailwind CSS, Firebase Realtime Database, Recharts, ESP32, EasyEDA, Arduino IDE, C++, Git, GitHub

Woof - Pet Adoption System

10/2023 – 04/2024

- Developed a Java-based desktop pet adoption management system using Swing and AWT event handling.
- Implemented role-based authentication, MySQL integration, and CRUD operations including report generation using JDBC.
- Built user-friendly interfaces with search, reporting, file handling, PDF generation, and i18n support.
- **Tech Stack:** Java, Swing, AWT, MySQL, JDBC, i18n, File I/O, PDF Generation, Git, GitHub

BlogCave – Full-Stack Blogging Platform

09/2025 – 11/2025

- Developed a PHP and MySQL-based blogging platform with secure authentication, role-based access, and blog management features.
- Built responsive user interfaces and implemented CRUD operations, user profiles, image uploads, and interactive post functionalities.
- Designed and optimized a relational database structure for efficient user and content management.
- **Tech Stack:** PHP, MySQL, HTML, CSS, JavaScript, XAMPP, Git, GitHub

CERTIFICATES

BCS Level 4 Certificate in IT

Java Programming Certification

SLIIT

EXPERIENCE

IoT & Embedded Systems Labs (IES Labs), Software Developer

09/2025 – Present

- Electronic Team Member

ICTBUS Institute, Academic Instructor

01/2025 – 01/2026

COMMUNITY AND LEADERSHIP

Hackelite 2.0, IEEE WIE Student Branch Affinity Group of UOM

Lead - Finance Committee

Annual General Meeting 2025, IEEE Professional Communication Society

Lead - Logistics Handling

Road to Legacy 2.0, IEEE of USJ

Member - Program Committee

Binara Padura 2.0, Rotaract Club of University of Moratuwa

Member - Finance Committee