

Gishan Chamith Bandara

Software Engineering | Applied AI/ML | Data-Intensive Systems

076 351 0388 | gishanb.23@cse.mrt.ac.lk | linkedin.com/in/gishan_chamith | github.com/gishanchamith | gishan.top

PROFESSIONAL SUMMARY

Computer Science undergraduate working across applied machine learning and full-stack software engineering. Experience building data pipelines at scale, training and evaluating ML models, and shipping production systems for real clients. Co-author of a peer-reviewed paper in data science. Seeking a trainee software engineer role spanning data science, AI, and software development.

EDUCATION

University of Moratuwa

B.Sc. Engineering (Hons) in Computer Science and Engineering

Moratuwa, Sri Lanka

2024 – Present

- **CGPA: 3.27 / 4.00**; Dean's Honors List: Semester 1.

St. Mary's College, Kegalle

G.C.E. Advanced Level Examination – Physical Science Stream

Kegalle, Sri Lanka

2022

- **Island Rank: 65**; **District Rank: 3**; **Z-Score: 2.74**.

TECHNICAL SKILLS

- **Languages:** Python, Java, JavaScript, TypeScript, C/C++, SQL (PL/pgSQL)
- **Mobile:** Flutter, Mobile-First Responsive Web, REST and WebSocket API Integration, Secure Token Storage, Offline/State Handling
- **Software Engineering:** Object-Oriented Programming, Data Structures and Algorithms, REST APIs, Database Design, Role-Based Access Control, Testing and Debugging
- **Frontend:** Next.js, React, Tailwind CSS
- **Backend and APIs:** Node.js, Express, Spring Boot, FastAPI, WebSocket, Socket.IO
- **Databases:** PostgreSQL, MySQL, MongoDB, Supabase
- **Data and AI/ML:** scikit-learn, pandas, NumPy, Matplotlib, Jupyter, YOLOv8, ByteTrack
- **Tools:** Git, GitHub, IntelliJ IDEA, VS Code, CLion, Figma, LaTeX

SELECTED TECHNICAL PROJECTS

Soyuru Sathkaraya – Educational Platform for O/L Students 🌐

Jan 2026 – Present

Flutter, Dart, Supabase (PostgreSQL), YouTube Player SDK, Local Persistence, TypeScript, CSS, JavaScript

- Built and shipped a web platform that restructures an educational YouTube channel's content into a syllabus-aligned hierarchy, reducing the time G.C.E. Ordinary Level students spend locating the lesson they need.
- Designed a curated content model in Supabase mapping subjects, topics, and lessons to video references, decoupling navigation from the channel's upload order and removing runtime dependency on external API quotas.
- Currently leading phase two: a cross-platform Flutter mobile app extending the same content model to Android and iOS, with in-app playback through the official YouTube embedded player.
- Implementing local persistence for bookmarks and resume-watching state to support offline-tolerant, low-bandwidth use.

ResearchLanka AI – AI-Powered Research Analytics Platform for Sri Lanka 🌐

Jul 2026 – Present

Python, FastAPI, PostgreSQL, React, TypeScript, Vite, Plotly, Cytoscape.js, Docker, GitHub Actions, AWS

- Building a national-scale research analytics platform aggregating Sri Lankan academic publications from OpenAlex, Crossref, SLJOL, and university repositories into a unified, deduplicated dataset — team of three, CS3501 Data Science and Engineering Project.
- Implemented OAI-PMH and sitemap-based harvesters for Sri Lankan university repositories, covering XML parsing, resumption-token pagination, and author/institution disambiguation across inconsistent metadata sources.
- Developing the React + TypeScript dashboard (Plotly analytics views, Cytoscape.js collaboration-network graphs) against a FastAPI/PostgreSQL backend, containerised with Docker and deployed via GitHub Actions to AWS.

Siyowin Institute LMS and Website – Lead Developer, Team of 6

May – Jun 2026

Next.js, Node.js, TypeScript, PostgreSQL, Supabase, PL/pgSQL

- Led development of a custom Learning Management System for a real client, enabling resource sharing and mark distribution for registered students, alongside the institute's public website.
- Directed technical decisions and architecture across a team of six, and owned end-to-end delivery from database schema design (PL/pgSQL) to full-stack TypeScript implementation.

MedSync (CATMS) – Clinic Appointment and Treatment Management System

Jun – Nov 2025

Full-Stack Development, Relational Database Design, Role-Based Access Control

- Built a full-featured clinic management system with role-based access control across five user roles: Front Desk, Doctor, Billing Staff, Branch Manager, and Patient.
- Implemented core modules including an appointment booking wizard, patient registry, treatment catalogue, invoicing with insurance coverage calculation, and insurance claims management.

Intelligent Traffic Ecosystem – Edge Detection Developer

Jan – May 2026

Python, YOLOv8n, ByteTrack, Raspberry Pi 5, Kafka, Flink, FastAPI, Kubernetes, Balena

- Contributed to a real-time, camera-based traffic monitoring platform replacing manual police radio coordination, processing a vehicle crossing to live dashboard update in **under 500 ms**.
- Developed the edge detection component (detection-edge): YOLOv8n object detection with ByteTrack multi-object tracking on Raspberry Pi 5, publishing events to Kafka via Balena OTA-managed deployment.
- Worked within a distributed architecture spanning Kafka event streaming, Flink stream processing with ST-GCN congestion forecasting, FastAPI/WebSocket backends, and Kubernetes-based GitOps deployment (ArgoCD, Prometheus, Grafana).

Sri Lanka Bird Diversity Dataset – Research Contributor

Jan – May 2026

Python, Geospatial Data Processing, Remote Sensing Features, Data Science, Dept. of CSE, University of Moratuwa

- Co-authored the paper “How Environment and Urbanization Shape Bird Diversity in Sri Lanka,” accepted to **MERCon 2026** (Data Science and Artificial Intelligence track).
- Built a spatiotemporal data integration pipeline linking 1.5M+ citizen-science bird observations (429 species, 25 districts, 2014–2024) with satellite-derived environmental features including NDVI, land cover, climate, aerosols, and nighttime lights.

SELECTED AWARDS AND RECOGNITIONS

- **1st Runner-Up** – Cypher 3.0 Hackathon, IEEE WIE Affinity Group, KDU, Oct 2025.
- **H. A. Punchihewa Memorial Award** – Academic Excellence, St. Mary's College, Kegalle, 2022.
- **Island Rank 65 / District Rank 3** – G.C.E. Advanced Level Examination 2022.

LEADERSHIP AND VOLUNTEER EXPERIENCE

IEEE Student Branch

University of Moratuwa

Student Chairperson, MERCon 2026

2024 – Present

- Student Chairperson – MERCon 2026; Technical Committee Lead – MERCon 2025; Program Committee Member – MERCon 2024.
- Volunteer Management Committee Lead (2025/26) and Committee Member (2024/25); Vice Chairperson – Rise Up Mora 2025.

Department of Computer Science and Engineering

University of Moratuwa

Vice Chairperson, SLIoT 2026

2025 – 2026

- Vice Chairperson – SLIoT 2026; Program Committee Member – ADScAI Symposium 2025.

Faculty of Engineering

University of Moratuwa

E1 Group Representative

2024

- Represented the E1 student group in academic and E group-level coordination.

REFERENCES

Prof. Dulani Meedeniya

Professor

Dept. of Computer Science and Engineering

University of Moratuwa

dulanim@cse.mrt.ac.lk

Dr. Kutila Gunasekera

Senior Lecturer

Dept. of Computer Science and Engineering

University of Moratuwa

kutila@cse.mrt.ac.lk