



Nayantha Nethsara

+94 70 2358060 | nayanthanethsara@gmail.com | www.nayantha.me

[in](#) [nayanthanethsara](#) [GitHub](#) [NayanthaNethsara](#)

About me

Computer Science undergraduate passionate about software engineering and AI, with proven experience in full-stack development, Gen AI, and robotics. Strong foundation in algorithms, problem-solving, and collaborative project execution, driven by curiosity and a continuous learning mindset.

My education

SLIIT / CURRENTLY READING

BSc (Hons) in Computer Science

ANANDA COLLEGE / 2022

GCE Advance Level - Mathematics

Tools & Technologies

LANGUAGES & FRAMEWORKS:

Java C/C++ Python JavaScript .NET Spring Boot PHP

DATABASES & PLATFORMS:

MySQL PostgreSQL MongoDB Firebase Supabase Redis

CLOUD, DEVOPS & INFRASTRUCTURE

Docker Git Linux Vercel CI/CD Postman AWS Azure

CONCEPTS & METHODOLOGIES

OOP REST Microservices SDLC Distributed Systems Agile

DESIGN & MULTIMEDIA TOOLS:

Figma Adobe Photoshop Adobe Illustrator Blender Canva

Project Highlight

Sosamala Voting – Secure Online Voting Platform

Developed an open-source, self-hostable voting platform handling 1,000+ concurrent users.

- Built with Next.js 14, PostgreSQL, Arcjet, and Google OAuth.
- Enforced one vote per verified user with hashed emails, server-side RLS, rate limiting, and bot detection.

TidyCourseweb – Chrome Extension for SLIIT Courseweb

Built a Chrome extension for the SLIIT Courseweb allowing students to hide/show modules.

- Developed using JavaScript (Manifest V3), HTML, and CSS with Chrome Storage Sync for preferences across devices.

Project-Based Learning Management System (LMS)

Developed a full-stack LMS using Spring Boot and Next.js implementing role-based access control, JWT authentication.

- Designed a microservice architecture with Dockerized services, hosted on Render.

Micromouse – Autonomous Maze-Solving Robot

Designed & implemented an ESP32-based robot in C++ that solves mazes using the flood-fill algorithm, integrating gyroscope feedback & motor control for precise navigation.

Work Experience



DEC 2024 | PRESENT

Research Assistant Intern under Prof. Nuwan Kodagoda

Began as a Generative AI Research Intern and later joined the COE-AI Research Team.

- Contributed to 3+ AI tools and 2 academic presentations in education technology.
- Developed a Gemini-based recommender chatbot, a prototype face recognition system (90%+ accuracy), and an OCR tool (~20% improvement vs Tesseract).
- Designed & launched the COE-AI web with CMS, enabling non-technical updates and cutting update time by 50%.



JAN 2025 | APRIL 2025

Associate Software Engineer (Part-Time) - RoboticGen

Worked closely with cross-functional teams to develop efficient software solutions.

- Developed and maintained software components for robotics systems and internal tools.
- Delivered 5+ major features on schedule, collaborating on planning and implementation.
- Optimized performance and improved code quality, reducing bugs by 20% through reviews and refactoring.



NOV 2024 | FEB 2025

Robotics Instructor - RoboticGen Academy

Guided students as a Level 2 Mentor, helping them build practical skills and confidence.

- Mentored 30+ students in one-on-one sessions and assisted in 5+ workshops.
- Supported 2 exhibitions showcasing student projects and promoting STEM engagement.

Key Achievements

Winner – VibeFlow AI Hackathon (2025)

Developed a software product, leveraging AI tools to create innovative solutions and demonstrate practical impact.

Finalist – National Olympiad in Informatics (2019)

Recognized among the top competitive programmers in Sri Lanka for exceptional problem-solving and algorithmic skills.

Top Participant – Reply Code Challenge (2021, 2023 & 2024)

Competed in an international team coding challenge, solving complex algorithms under time pressure.

Leadership

CSSC MAY 2025 | PRESENT

President (current)

- Lead the university’s CS community and drive student-focused tech initiatives.
- Organize 5+ tech events, reaching over 500+ participants.
 - Launch peer-learning programs that boost member engagement by 40%.
 - Build and manage a core team of 15+ members to promote leadership and teamwork.
 - Partner with industry professionals and alumni to deliver high-impact sessions.

ACICTS FEB 2021 | FEB 2022

Vice President

- Ananda College ICT Society (ACICTS). Led student-driven ICT initiatives.
- Coordinated 10+ coding competitions and events, engaging 200+ participants.
 - Conducted morning teaching sessions for 50+ students to build foundational ICT knowledge.
 - Represented ACICTS in inter-school competitions and secured 5+ team victories.

Additional Achievements

Academic & Technical

- Finalist – IEEE R10 Robotics Competition (2024)
- Finalist – Algothon Contest, CODEFEST (2025)
- Dean’s List – SLIIT (2024)
- MicroMaze Micromouse – IIT IEEE Competition (2024)
- Participant – Google Code-in (2018 & 2019)
- 9As – G.C.E. Ordinary Level | Ananda College Prize-Giving Honoree
- Winner/Runner-up – ICT Day Competitions at St. Peter’s, Wesley, and Museaus Colleges

Sports & Athletics

- Ananda College Road Race Top 10 – 2018 | 2019
- KDU Inter-University Meet – 5000m Track Event
- Ananda College Sport Meet – Track & Field Events

Esports & Gaming

- Champion – Interschool Esports Championship (Dota 2) (2018, 2019, 2022 – Multiple titles over 3 years)
- Champion – Interschool Esports Championship 2018 Runners Up COD 4

Projects & Initiatives

Creativo Code

- A startup rooted in the collaborative efforts of the Ananda College ICT Society
- Led UI/UX and branding efforts across 5 client projects.
 - Contributed to design and development of 5+ digital products, combining innovation, usability, and impact.

DSL Compiler & GUI for HTML Form Generation

- Built a DSL compiler using Lex, Yacc, and Rust.
- Designed a Tauri-based GUI for live preview.
 - Use CLI flags for theme, shape, and style options.

Medhub – Patient Management System

- Developed a PMS using Spring Boot for small-scale hospitals.
- Implemented patient records, appointments, billing & ect.
 - RESTful APIs with role-based access & secure auth.
 - Dockerized services and used PostgreSQL for DB.

GitHub Profile-Based Minesweeper Game

- Developed an interactive Minesweeper game using GitHub README images as the board. Implemented real-time state updates with Upstash Redis and a Next.js API, ensuring synchronized gameplay without CDN caching issues.

AquaClash Swimming Scoreboard Application

- Built a serverless Next.js and Firebase app to manage real-time scores for 50+ events with 200+ participants, handling 1,000+ concurrent users and providing instant updates for competitors and spectators

Sosamala – IoT Sensor Monitoring & Control System

- ESP32-based IoT platform with sensors and MQTT for real-time monitoring and remote device control.

Co-Developer - Battle of the Maroons Live Score App - 2019

- Co-developed a real-time scoring platform for the Big match.
- Delivered live updates to 2,000+ online viewers.
 - Used Firebase & React for real-time syncing & UI rendering.

Volunteer Experience

Session Conductor – SLIIT FCSC Study Support

- Delivered over 5+ academic support sessions organized by the Faculty & Department, assisting 500+ peers.

Technical Crew – Ananda College Prize-Giving (2019–2020)

- Operated live broadcast systems and managed stream quality for 2+ annual school prize-giving events, ensuring smooth and uninterrupted technical execution.

Event Volunteer - SLIIT AquaClash & Relay Carnival

- Supported logistics & operations for university Swimming & relay events over 2 years, ensuring smooth execution each time.

References

Prof. Nuwan Kodagoda

BSc Eng (Hons) – University of Moratuwa
MPhil – University of Moratuwa | PhD – Sheffield Hallam
MBCS, MIET, MCSS
Pro-Vice Chancellor (Computing)
Faculty of Computing, SLIIT – Malabe Campus
Email: nuwan.k@my.sliit.lk
Phone: +94 117 544 102

Prof. Anuradha Jayakody

PhD – Curtin University (Australia)
MPhil – (UOP) | MSc in IS – SLIIT | BSc (Hons) – (Greenwich)
MBCS, CITP, CEng (EC-UK), MIET, MIEEE, CCAI, MCSSL, MCP
Head – Department of Computer Systems Engineering
Faculty of Computing, SLIIT – Malabe Campus
Email: anuradha.j@sliit.lk
Phone: +94 11 754 3923 | +94 71 490 0228