Senaka Gamaralalage **Kaveen Himash** Ranaweera



Machine Learning · AI Engineering · System Design | BSc (Hons) AI and Data Science

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PROFILE

Second-year BSc (Hons) Artificial Intelligence and Data Science undergraduate (Dean's List) at the Informatics Institute of Technology, in partnership with Robert Gordon University, seeking a third-year IT internship in machine learning, AI engineering or system design. Built and maintain ntfsmac, an open-source macOS utility with 600+ GitHub stars, and developed a Python MCP server with an estimated 74% Claude token saving on a 27-task benchmark, applying Python, Java, SQL, secure coding and automated testing. Committed to applying AI for the benefit of humanity.

EDUCATION

- **BSc (Hons) Artificial Intelligence and Data Science (Reading)**, Informatics Institute of Technology (IIT), Colombo, in partnership with Robert Gordon University (RGU), UK · Sep 2025 – Apr 2029 (expected) · Dean's List
  - Selected modules: Data Structures and Algorithms for AI (A) · Database Systems (A) · Computer System Fundamentals (A) · Computational Mathematics (A) · Web Technology (A) · Programming Fundamentals (B)
  - Group project: Data Science Group Project (DSGP), Group 12 (team of 4) · leptospirosis hotspot prediction and patient management system · in progress
- **Foundation Programme**, Informatics Institute of Technology · Sep 2024 – Apr 2025 · Gold Medal
- **GCE Advanced Level (Biology stream)**, Rahula College, Matara · 2024

PROJECTS

- **ntfsmac** · Open-source NTFS and ext4 read/write utility for Apple Silicon macOS · Swift, Shell, NFS, microVM (libkrun), XPC · MIT · Solo author
  - Shipped a Homebrew CLI and menu-bar GUI that mount NTFS drives with no kernel extension and no SIP changes. **600+ GitHub stars, 22 forks, 115 commits;** thanked by third-party users on X.
  - Engineered a microVM-over-NFS architecture with a privileged XPC helper, BitLocker unlock via stdin-only credentials, device-ID input validation and per-session firewall isolation; builds on the open-source anylinuxfs runtime. Built with AI-assisted development (Claude Code); includes a diagnostics command and an automated test suite.
- **Glass Player** · Native macOS video player · Swift, Metal 4 / MetalFX, libmpv, GLSL, VideoToolbox · GPL-3.0 · **30+ GitHub stars**
  - Implemented a zero-copy IOSurface rendering pipeline, MetalFX super-resolution upscaling, 39 bundled Anime4K shaders, hardware decoding (HEVC, H.264, AV1) and a live GPU-latency HUD. Built with AI-assisted development.
- **Puppet Master** · MCP server that offloads bulk LLM work to a local model · Python, Model Context Protocol · MIT
  - **363 tests at 89% coverage;** estimated 74% Claude token savings on a 27-task benchmark (read accuracy 95–100%, write checks 86%) run on an M3 Pro with 18 GB RAM. Guardrails enforced in code: claim verification, staged patches and test-gated apply.
- **Other:** Anime4K-Upscalar-macOS (SwiftUI, FFmpeg) · Smart Event Volunteer Coordination System (Java, OOP) · Healthcare Appointment Site (HTML5, CSS, JavaScript, XML)

TECHNICAL SKILLS

- **Programming:** Python, Java (OOP), SQL, JavaScript, HTML, CSS · Swift (AI-assisted development) · C (basic)
- **AI and Data:** Machine Learning, Deep Learning, Generative AI (IIT PDU coursework) · Data Cleaning (IIT DSGP coursework) · NumPy, pandas, scikit-learn, Matplotlib (learning)
- **Engineering:** System Design, Software Architecture, Data Structures and Algorithms, Databases, Secure Coding (input validation, privilege separation), Unit Testing
- **Tools and Platforms:** Git, GitHub, Docker, Linux, macOS, Parallels, Homebrew, MCP, VS Code, Claude Code

SOFT SKILLS

- **Ownership and initiative:** Sole author and maintainer of three public projects; ntfsmac reached 600+ GitHub stars
- **Communication:** Published an article on the IEEE Computer Society IIT blog; documented projects for public users
- **Teamwork:** Member of the Rahula College Western Band, Matara; collaborating in a four-member DSGP team and a three-person IEEEXtreme team
- **Adaptability:** Moved from a Biology A/L stream to AI and Data Science; Foundation Gold Medal, Dean's List

CERTIFICATIONS

- LinkedIn Learning (Java): Objects and APIs (Sep 2026) · Data Structures (Feb 2026) · Syntax and Structure (Feb 2026)
- Professional Certificate in Artificial Intelligence, IIT Professional Development Unit (PDU) · Jul 2025

LANGUAGES

- English (fluent) · Sinhala (fluent)

ACTIVITIES AND ACHIEVEMENTS

- Participant (team of 3), IEEEXtreme 20.0, 24-hour global programming competition (Oct 2026)
- Author, "Exposing The Man Behind Your Chatbot", IEEE Computer Society IIT blog
- Member, Rahula College Western Band, Matara

REFERENCES

- Kasun Dananjaya Delgolla, Chief Technology Officer, Surge Global and Calcey Technologies · kasun@surge.global · linkedin.com/in/kasundananjaya