

GANINDU DESHAPRIYA

AI/ML/NLP Researcher & Developer | Full-Stack Solutions Developer



Colombo, Western Province, Sri Lanka | Email: ganindudeshapriya@gmail.com | Phone: +94 71 259 2232

<https://www.linkedin.com/in/ganindu-deshapriya-362415237/> | <https://github.com/Ganindu-Deshapriya> | ganindudeshapriya.me

PROFESSIONAL SUMMARY

Computer Science undergraduate and applied AI researcher focused on Natural Language Processing, Machine Learning, and locally deployable Large Language Models. Experienced across the full development lifecycle, from backend reasoning systems to full-stack web applications. Co-founder of a university computing association and active technical volunteer with a track record of leading hackathons, research publications, and community-driven tech and IEEE initiatives.

SKILLS

- AI/ML: Natural Language Processing (NLP), Computer Vision, Deep Learning, Large Language Models (LLMs), Prompt Engineering, Generative AI, Model Fine-Tuning, Uncertainty-Guided Reasoning
- Programming Languages: Python, C, JavaScript/TypeScript
- Frameworks & Tools: Next.js, Node.js, n8n (workflow automation), REST APIs, Git/GitHub
- Systems & Infrastructure: RISC-V, xv6 OS Internals, Linux, DigitalOcean, Vercel, SSL/Certbot
- Other: Full-Stack Web Development, Data Analysis, Regression Analysis, Big Data Analytics, Project Management, Service-Oriented Architecture (SOA)
- Leadership: Event Management, Volunteer Management, Team Leadership, Public Speaking

PROJECTS

Memory Access Guard (MAG+) | Operating Systems Coursework

- Built a kernel-level memory protection and logging framework for xv6-riscv that intercepts illegal memory accesses via trap handling.
- Classified fault regions (null dereference, unmapped memory, buffer overflows) and logged structured fault data in a circular kernel buffer.
- Exposed fault logs to user space through a custom system call (memlog) and ensured only the faulty process was terminated, keeping the rest of the system stable.

Debater-AI | Independent Project

- Developed a multi-agent AI application in which two AI personas autonomously debate opposing sides of a topic.
- Designed the adversarial agent architecture and orchestration logic for structured, multi-turn debate and conclusion generation.

AI/Tech News Digest Automation | Independent Project

- Built an automated n8n pipeline that scrapes 10 AI/ML/tech RSS feeds and publishes a daily digest to GitHub Gist without manual intervention.

- Deployed the workflow on a self-managed DigitalOcean VM with a custom domain and SSL (via Certbot), running on a daily schedule.
- Built and deployed a Next.js frontend on Vercel to present the digest in a readable format.

Ceylon Explorer / Serendib (Cursor Colombo 24H Buildathon) | Team Codingers

- Built an AI-powered conversational travel-planning avatar for Sri Lanka trip planning within a 24-hour buildathon, for the "Beyond Presence" track.
- Implemented an n8n-based workflow (self-hosted on DigitalOcean) that captured leads, triggered the conversational agent, and auto-sent trip summary emails to clients and organizers.

Blood Inventory Management System (BIMS) | Software Development Project

- Developed a role-based blood inventory management system supporting donor and hospital workflows for blood donation and inventory coordination. Laravel framework.
- Implemented separate authentication and system functionality for donors and hospitals, enabling structured management of blood-related records and requests.

LifeAdmin AI | Full-Stack Personal Project

- Built a full-stack subscription, warranty, and cloud-account tracker using Next.js 14, Supabase (Auth, Postgres, Row-Level Security), and Google OAuth, with protected routes enforced via middleware.
- Integrated the Gemini API through server-side routes for receipt OCR, auto-categorization, and a spend-insight chat assistant grounded in the user's live inventory data.

Power BI Marketing Strategy Dashboard | Data Analytics Coursework

- Built an interactive Power BI dashboard to analyze streaming service performance and support a December 2025 marketing strategy.
- Designed KPI cards and time-based visualizations to track customer, engagement, and performance trends across key business metrics.
- Transformed analytical findings into actionable marketing insights through focused dashboard storytelling and data visualization.

Customer Churn Prediction Model | Machine Learning Project

- Developed a machine learning pipeline to predict customer churn using the Telco Customer Churn dataset.
- Evaluated multiple classification models, including Logistic Regression, Random Forest, KNN, and XGBoost, using Accuracy, Precision, Recall, F1-score, and ROC-AUC.
- Applied data preprocessing and model evaluation techniques to identify high-risk customers and support data-driven customer retention strategies.

Diabetes Risk Factors Analysis | Data Analytics Coursework

- Analyzed a large-scale diabetes health indicators dataset containing over 250,000 records and 22 health-related variables to investigate factors associated with diabetes risk.
- Performed exploratory data analysis and statistical testing, including frequency analysis and Chi-square tests, to examine relationships between health indicators and diabetes status.
- Used SPSS and Power BI to interpret and visualize key risk factors, translating statistical findings into clear data-driven insights.

J'puraXtreme 2.0 Website | Web Development / Event Project

- Developed the web presence for J'puraXtreme 2.0, a two-round competitive programming event organized as part of IEEEExtreme preparation at the University of Sri Jayewardenepura.
- Built a Batman-themed event experience aligned with the competition's branding and promotional campaign.

- Supported participant communication and event visibility through a centralized web platform for competition-related information.

EXPERIENCE

Chairperson, J'puraXtreme 2.0 | IEEE CS Student Branch Chapter - University of Sri Jayewardenepura

Aug 2025 - Oct 2025 | Colombo, Sri Lanka

- Led planning and execution of J'puraXtreme 2.0, a competitive programming event for the university community.

Volunteer Management Standing Committee Member | IEEE CS Student Branch Chapter - University of Sri Jayewardenepura

Jan 2025 - Feb 2026 | Colombo, Sri Lanka

- Managed volunteer recruitment, coordination, and engagement for chapter-run technical events.

Student Branch Ambassador - USJ, Region 10 | IEEEExtreme

Jun 2025 - Nov 2025 | Remote

- Represented the University of Sri Jayewardenepura for IEEEExtreme 19.0, driving awareness and participation in the global 24-hour competitive programming challenge.
- Supported and grew the competitive programming culture on campus, building on a Top 50 (Sri Lanka) and 1st place (USJ) result achieved in IEEEExtreme 18.0.

Coordinating and Finance Committee Member, IEEEExtreme 18.0 | IEEE Student Branch - University of Sri Jayewardenepura

Oct 2024 (1 month) | Colombo, Sri Lanka

- Coordinated logistics and managed finances for the branch's IEEEExtreme 18.0 event.

Member | IEEE Student Branch - University of Sri Jayewardenepura

Oct 2023 - Present | Colombo, Sri Lanka

- Active member contributing to branch initiatives, technical events, and community outreach.

President / Co-Founder | Association of Computing Students - University of Sri Jayewardenepura (ACS-USJ)

Feb 2024 - Jun 2025 | Colombo, Sri Lanka

- Co-founded ACS-USJ and served as its first president, building the association's founding structure and culture from the ground up.
- Organized CodeFUSE '24, the faculty's first intra-faculty coding hackathon, run on the HackerRank platform.
- Helped launch EDUACS, an outreach initiative delivering A/L ICT seminars, reaching 8 schools through 4 major seminars within a few months.
- Launched TechXplore Edition 1.0, a tech talk and industry session series connecting undergraduates with the tech industry.
- Led a multi-project executive team, coordinating volunteers and academic staff to grow the faculty's student-led tech community.

Media Crew Member, Speech Master 2025 | Gavel Club of University of Sri Jayewardenepura

Jan 2025 - Jun 2025 | Colombo, Sri Lanka

- Supported media coverage and production for club events and the Speech Master 2025 competition.

Election official Staff Assistant | Election Commission Sri Lanka

Jan 2023 - Mar 2023 | Colombo, Sri Lanka

- Gained 3 months hands on experience in Election Management, Legal Documentation processes and management workflow.

EDUCATION

Bachelor of Computing (Hons.) in Computer Science | University of Sri Jayewardenepura

Jun 2023 - Present

- Relevant coursework: Service-Oriented Architecture (SOA), Project Management, Operating Systems, Data Analysis, and related computing modules.

GCE Advanced Level - Physical Science Stream | Ananda College

Jan 2012 - Aug 2022

- Activities: Japanese Language Association, Sinhala Literary Association.

CERTIFICATIONS

- Introduction to Machine Learning - Duke University
- Python for Beginners - University of Moratuwa - Credential ID: OPMxJvVRGG
- Machine Learning in Production – Deeplearning AI (ongoing)

PUBLICATIONS

- "A Narrative Review of Methods, Effectiveness, and Limitations of Self-Refinement in Large Language Models" - Proceedings of the 1st Jayewardenepura Computing Symposium (JCoS), 2026.
- "A Dual-Phase Financial Strategy for Sustainable Customer Loyalty: Integrating Fixed Deposits and Voucher Systems in Sri Lankan Supermarket Retail" - Economics, Management and Sustainability Scientific Journal, Jun 2025.

LEADERSHIP & AWARDS

- Outstanding Volunteer Award - IEEE Excellencia '26, recognizing 2+ years of volunteer leadership with the IEEE Student Branch, University of Sri Jayewardenepura.
- Co-Founder & Inaugural President, Association of Computing Students - University of Sri Jayewardenepura (Feb 2024 - Present).
- Student Branch Ambassador – IEEEEXTREME 19.0 (for IEEE Student branch, University of Sri Jayewardenepura)

LANGUAGES

English - Professional Proficiency

Sinhala - Native / Bilingual Proficiency