CHANUTH ABEYNAYAKE

300/44,Ihalakaragahamuna,Kadawatha • +94713433307 •chanuth412@gmail.com

Linked in , Upwork, Github

Computer Engineering undergraduate at the **University of Peradeniya**, interested in software development, infrastructure, and automation. I enjoy solving problems and gaining practical experience by working on real-world projects in different domains.

EDUCATION

University of Peradeniya - Computer Engineering

- Current GPA - 3.70

AI examination - 3A

- Isalnd Rank - 966

EXPERIENCE

Freelancing (Upwork) - Account & Feedbacks

AI-Powered Infrastructure Generation (Client work)

Technologies: Python, LangGraph, Ollama, AWS, Terraform

- Multi-agent AI system to automatically generate Terraform configurations for AWS infrastructure. Integrated LLMs and RAG to generate context-aware infrastructure code.

blogs written - click for system overview , github

- **Deployed the complete system on AWS, adding AI agents to handle infrastructure setup, deployment and post-deployment checks with security measures.**

Static Website - Web Development - (Client work)

Technologies: Astro, JavaScript, HTML, CSS

- Developed and maintained website pages using Astro.
- Integrated contact forms and email delivery using Web3Forms and Spacemail.

Static web page - https://racoona.ai/ , github

FreeIPA – Identity Management Migration in University Infrastructure

Technologies: FreeIPA, OpenLDAP, Podman, AlmaLinux, Keycloak

- Migrated legacy OpenLDAP infrastructure to a centralized FreeIPA identity management system.
- Containerized FreeIPA using Podman on AlmaLinux 9 (There were some incompatibles with cgroups v2 when using Docker)
- Used Keycloak and Google Workspace for Single Sign-On (SSO).

blogs written - **blog1** - guide , blog 2 - overview

Peracom Web Services – Internal Developer Platform

Technologies: Proxmox VE, Terraform, Ansible, Kubernetes, Prometheus, Grafana

- Developed an internal developer platform inspired by **Spotify Backstage** to automate infrastructure provisioning and deployment.
- Automated Terraform for VM provisioning and Ansible for Kubernates cluster depoyment.
- Used Prometheus and Grafana for automated infrastructure monitoring and alerting. - github

PROJECTS

GloveXcel - Iot glove for monitoring for phisiotherapy

Technologies: ESP32, BLE, React, Node.js, PostgreSQL, MongoDB, AWS

- Developed an IoT-based rehabilitation glove to monitor hand movements and support home-based physiotherapy
- ESP32 firmware for real-time sensor data filtering and BLE communication (power efficiency) .
- Dual database architecture MongoDB - high volume sensor data, PostgreSQL - relational data
- Node.js/Express APIs using asynchronous, non-blocking I/O for real-time sensor data handling.

GitHub: https://github.com/cepdnaclk/e21-3yp-GloveXcel

Undergraduate Research Project – Machine Learning for Clinical Time-Series Prediction (Ongoing)

Technologies: Python, Pandas, NumPy, Scikit-learn, XGBoost, LightGBM

- Developing ML pipelines for multivariate clinical time-series prediction.
- Performing temporal feature engineering, data imputation and event labelling.
- Evaluating prediction performance across 30, 60 and 120-minute sampling intervals using patient-wise validation.
- Analysing AUROC, AUPRC, PPV, sensitivity and false-alarm rates

Supervisor: Dr. Upul Jayasinghe

Agrimate – Direct Farmer-to-Customer Platform

Technologies Used: Flutter, Node.js,, NoSQL Databases(Firebase)

- Developed a bilingual direct-to-consumer marketplace mobile app.
- Used GenAI API with the OpenWeather API to dynamically generate localized crop care precautions based on weather data forcastings and specific growth stages.
- Implemented Greedy Nearest-Neighbor algorithm to give cost-efficient delivery routing - (blog post), (github)

Open Source Contributions

Python Packaging Authority (PyPA) – build

- Fixed incorrect troubleshooting suggestions when build isolation is disabled by updating error handling and adding test coverage. (PR #1283 – Merged).

Terrakube – Infrastructure as Code Platform

- Fixed repository URL parsing to correctly remove trailing .git without affecting hostnames or repository names.
- Added regression tests covering GitHub Pages, Gitea and repository names containing .git.

(PR #3922 – Merged).

COMPETITIONS & ACHIEVEMENTS

SLASSCOM Xcelerate Inter-University Hackathon 2026

- Role - Team Leader , Top 12 Finalist

SLIIT CodeFest 2026 – Innov IoT

- Role - Team Leader , Top 10 Finalis

SLT CodeBlast 2025

- Role - Team Leader , Top 10 Finalistss

CERTIFICATIONS

AWS Cloud Technical Essentials

- Amazon Web Services (AWS)
- Issued Nov 2026

Advanced Learning Algorithms

- DeepLearning.AI, Stanford University
- Issued Dec 2024