

Thathsara Madusha

COMPUTER SCIENCE UNDERGRADUATE · SOFTWARE & DEVOPS ENGINEER

Negombo, Sri Lanka

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Education

University Of Colombo School of Computing

Colombo 07

BACHELOR OF SCIENCE (HONS.) IN COMPUTER SCIENCE

2023 - 2027

- GPA: 3.66 / 4.00

Nalanda College

Colombo 10

G.C.E. A/L - COMMON STREAM (MATHEMATICS | IT | PHYSICS)

2020 - 2022

- Z Score - 2.01

Experience

WSO2 LLC

Colombo, Sri Lanka

INTERN SOFTWARE ENGINEER

Nov. 2025 - Apr. 2026

- Designed and shipped a full-stack feature that lets developers attach persistent storage to their cloud applications through a self-service interface, eliminating the need for manual infrastructure configuration.
- Wrote backend services in Go that automatically create, share, and clean up storage volumes across application components, handling deduplication and lifecycle management transparently.
- Built the user-facing React/TypeScript interface for a marketplace where developers can publish, discover, and connect to shared storage resources.
- Coordinated delivery across six codebases and three teams, with all changes passing senior engineering review, automated testing, and integration validation before release.

Content Management System & Web Application Development

Remote

FREELANCE WEB DEVELOPER

2022 - 2024

- Delivered Laravel-based CMS and web applications for multiple clients, owning backend architecture, deployment, and ongoing maintenance.
- Improved client search visibility and page performance through SEO best practices, structured data markup, and front-end optimisation.

Selected Projects

Home Lab

HOMELAB INFRASTRUCTURE

2024 - Present

- Built and operate a self-hosted infrastructure lab exposed to the public internet, running production-grade services on commodity hardware.
- Deployed a Kubernetes cluster for container orchestration and configured Nginx as a reverse proxy/load balancer with TLS termination.
- Monitor cluster health and resource usage via Grafana & Prometheus dashboards and host multiple self-managed development services.

Seer

GitHub

GPT-STYLE LLM FROM SCRATCH

2026

- Implemented a GPT-style transformer language model end-to-end in Rust using HuggingFace's Candle tensor framework, with optional CUDA and Metal backends.
- Built the full training pipeline from scratch: BPE tokenizer integration, sliding-window data loader, token and positional embeddings, multi-head causal self-attention, and stacked transformer blocks with LayerNorm and residual connections.

CareerSync

INTELLIGENT TALENT PIPELINE SOLUTION

Jul. 2025 - Aug. 2025

- Built a cloud-native recruitment platform with a React/Laravel stack that processed over 12,000 résumé PDFs with OpenAI for automated candidate screening and career guidance.
- Provisioned the production environment with Terraform and deployed the platform on Kubernetes.

Pixel AI

[GitHub](#)

AI-POWERED LEARNING PLATFORM

Jul. 2025

- Developed an e-learning platform using a React/TypeScript frontend and a Ballerina backend.
- Designed a RESTful API with modular services covering user management, content delivery, exam management, and progress tracking.
- Integrated OpenAI for AI-driven content generation, MySQL for data persistence, and AWS SES for transactional email (account verification and notifications).

Smile

[GitHub](#)

VOLUNTEER MANAGEMENT PLATFORM

Apr. 2025 - Aug. 2025

- Built a volunteer management platform using Laravel, Livewire, and Volt for reactive components.
- Implemented an AI-powered event recommendation system using the Google Maps API, OpenAI embeddings, and cosine similarity to match volunteers with suitable opportunities.
- Created a real-time messaging system for communication between volunteers and organisers.
- Implemented user verification using AWS Rekognition for facial recognition.

Research

DDoS-Aware Autoscaling in Cloud Computing Environments

[University of Colombo](#)

Ongoing

- Conducting research on DDoS-aware autoscaling to enhance cloud resilience against EDoS attacks.
- Investigating gaps in distinguishing legitimate vs. malicious traffic and DDoS-aware resource allocation.

Skills

Programming Languages	Go, Rust, C/C++, JavaScript/TypeScript, PHP, SQL, Ballerina, Python
DevOps & Tools	Docker, Kubernetes, Terraform, Git, GitHub Actions, Grafana, Prometheus
Web	Laravel, React, Vue.js, Node.js, Django
Databases	MySQL, PostgreSQL, Redis
Platforms	Amazon Web Services, Google Cloud Platform

Extracurricular Activities and Volunteering

AIESEC - Incoming Global Talent

[University Of Colombo](#)

ORGANIZING COMMITTEE VICE PRESIDENT – INSIGHT 2024

2023 - 2024

- Developed the delegate registration website for Insight 2024, handling form workflows and data collection.

Awards

2023, 2024 **Director's List Award** for Academic Excellence

[UCSC](#)