CHANNA KARAWITA

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Portfolio: https://ch4nnxdev.github.io/channa-portfolio/

SUMMARY

Aspiring Software Engineer with hands-on experience in full-stack development, real-time systems, and AI/ML projects. Skilled in Python, TypeScript, React, FastAPI, Kafka, and LangChain. Passionate about building scalable, high-impact applications and continuously learning new technologies.

WORK EXPERIENCE

Software Engineer Intern, SLTMobitel   **June 2025 - Present**

- Developed backend systems including a CRM (PHP, MVC, JavaScript, SQL) and a Feedback Management System (PHP, CodeIgniter) with scalable databases, CRUD operations, and role-based access control (RBAC)

- Built a complete Angular UI with responsive components and integrated Azure Active Directory authentication, enhancing user experience and security.

EDUCATION

Bsc in Computer Science, Informatics Institute of Technology   **Sep 2023 - 2027**
(awarded by University of Westminster), Colombo, Sri Lanka

Diploma in Applied Statistics, IASSL, Colombo, Sri Lanka   **April 2025-2026**

PROJECTS

Neural Network from Scratch   **June 2025**

- Built a fully-connected neural network in Python without high-level frameworks, implementing forward/backpropagation and gradient descent.
- Supported multiple activation & loss functions and optimized training with mini-batches and learning rate tuning.
- Evaluated performance on standard datasets, achieving high accuracy with visualization of results.

Real-Time Chat Application   **July 2025**

- Designed and built a scalable real-time chat app using Node.js, Express.js, and TypeScript in a microservices architecture.
- Implemented event-driven messaging with Apache Kafka and WebSockets for low-latency, bi-directional communication.
- Integrated an API Gateway for centralized routing, authentication, and rate limiting across services.
- Developed a secure authentication system with JWT + OAuth (Google, Microsoft, Facebook).

RAG Application

- Built an AI-powered document query system using Python, FastAPI, and React with a LangChain-based RAG pipeline.
- Integrated a vector database for efficient embedding storage and similarity search.
- Delivered context-aware answers from large document sets, demonstrating scalable and modular architecture

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SKILLS

Python, Java, TypeScript, JavaScript, Angular, React, Tailwind CSS, Node.js, Express.js, FastAPI, Django, REST APIs, MongoDB, MySQL, Kafka, WebSockets, Docker, Microservices, LangChain, Machine Learning, Neural Networks, Hugging Face APIs, MediaPipe, OAuth, PHP, Laravel, CodeIgniter