



Chamath Gunapala

Software Engineer | AI Engineer | Computer Science and Engineering

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Summary

I am a Software Engineer passionate about artificial intelligence, machine learning and building intelligent systems that solve real-world problems. I focus on developing scalable software solutions and applying modern AI techniques to create intelligent applications and solve complex challenges. I enjoy working at the intersection of software engineering and AI, and I am constantly exploring new advancements in technology to build innovative and impactful solutions.

Education

University of Moratuwa

May 2022 - June 2026

B.Sc. Engineering (Hons) in Computer Science and Engineering

- CGPA: 3.53/4.00
- Specialized in Data Science and Engineering (DSE)
- Minor in Mathematics

St. Anne's College, Kurunegala

Feb 2012 - Oct 2020

Advanced Level – Physical Science Stream : 3 A's – Z-Score: 2.2024 – Island Rank: 524

Experience

Coachello AI

Paris, France (Remote)

Software Engineer

June 2026 – Present

- Developing and improving Coachello's **AI-driven backend services** to deliver personalized coaching experiences.
- Developing an agentic AI system to automate coaching program creation and management.
- Monitoring and resolving production issues to ensure the reliability of owned features on **Azure**.

Software Engineer (Part-Time)

Jun 2025 – May 2026

- Implemented Microsoft SaaS fulfillment integration , automating license validation and access provisioning for Coachello applications through secure subscription lifecycle management.
- Architected a payment management system, automating invoice calculations, enabling employee-submitted custom invoices, implementing review and validation workflows, tax calculations, payment method integrations, and financial analytics.
- Ensured the reliability of owned features by monitoring and resolving production issues on **AWS**.
- Designed and implemented frontend and backend features.

Software Engineering Intern

Dec 2024 – May 2025

- Developed backend features, **API integrations, and database structures** using **FastAPI**, enabling intelligent automation and scalable workflows.
- Improved UI/UX and implemented front-end components using **React.js**.
- Built custom automation bots using **Playwright** and **Selenium** to streamline internal and external processes.
- Developed Google Pub/Sub functions on **GCP** to manage subscription lifecycles and custom notifications.

Publications

Evaluating the Contextual Understanding of LLMs using Knowledge Graphs |

June 2026

Accepted as at the International Conference on Machine Learning Global South ML Workshop, Seoul, Korea

Selected Projects and Research

LLM Benchmarking & Evaluation | *in collaboration with Miami University* Jan 2025 – Feb 2026

Technologies: Python, Hugging Face, Graph Embedding, Neo4j | Final Year Research Project

- Developed a graph-based evaluation pipeline to benchmark reasoning capabilities and factual consistency of LLMs.
- Engineered a system to extract structured Knowledge Graphs from unstructured LLM outputs, **dynamically improving prompts to reduce hallucinations** and ensure accurate fact extraction.
- Implemented similarity calculations using SBERT and Weisfeiler-Lehman graph kernels to compare extracted facts with ground-truth knowledge, enabling rigorous evaluation of LLM contextual understanding.

AgentBroker |  2025

Technologies: FastAPI, Playwright, Pinecone, HTML/JS | Personal Project

- Architected an autonomous AI agent with **MCP-based tool orchestration** and **RAG retrieval** via Pinecone for real-time financial market analysis, backed by asynchronous Playwright scraping pipelines.

SEWA.LK |  2025

Technologies: FastAPI, React, PostgreSQL, SQLAlchemy, Redis, Firebase | Semester 05 Project

- Led the development of an AI-powered job marketplace, architecting a **RAG-based conversational recommender** and a robust backend, featuring JWT + OTP authentication, SQLAlchemy ORM, and Redis caching.

Mini Trading System |  2025

Technologies: C++, Object-Oriented Design | Personal Project

- Built a **multithreaded client-server exchange simulator** in C++ with price-time priority order matching, partial-fill execution, persistent wallet settlement, and session-resilient architecture.

Additional Projects |   2023 – 2024

Technologies: Java, ReactJS, NodeJS, Express, MySQL | Academic Projects

- Architected a multi-tier HR Management System with ReactJS/NodeJS/MySQL and role-based access across four organizational levels.
- Engineered a compiler pipeline in Java with lexical analysis, AST generation, and CSE machine execution.

Technical Skills

Languages: Python, C++, Java, TypeScript, JavaScript
Databases: MySQL, MongoDB, PostgreSQL, Redis, ChromaDB, Neo4j
ML/AI: HuggingFace, LangGraph, PyTorch, Pandas, LangChain, scikit-learn, NumPy, TensorFlow
Web/Backend: FastAPI, Node.js, REST/GraphQL, React, Next.js
Cloud/DevOps: Docker, AWS, CI/CD, Kubernetes, GCP, Azure

Languages

English: Professional Proficiency
Sinhala: Native

References

Prof. Uthayasanker Thayasivam
Senior Lecturer, FYP Supervisor
Dept. of Computer Science and Engineering,
University of Moratuwa
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Certifications

AWS Academy Graduate – Data Engineering (2026)
Microservice Architectures (2026)
GraphQL Fundamentals (2026)
Object Oriented Programming (2025)
Agile Software Development (2025)
Cloud & DevOps: AWS ECS, AWS Basics, Docker (2025)
Model Context Protocol (MCP) Mastery (KodeKloud 2025)
Fundamentals of Deep Learning (NVIDIA 2025)
AWS Academy Graduate – ML Foundations (2024)
Machine Learning Specialization (2023)

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