

CHARUVARTHAN T

Chennai, India

+91 9444041781

✉ charuvarthan05@gmail.com

in in/charuvarthan-t

github.com/Charuvarthan-T

Education

B.Tech in Computer Science and Engineering (Artificial Intelligence)

Amrita School of AI, Amrita Vishwa Vidyapeetham, Coimbatore

2023 – Expected 2027

Technical Skills

Core CS Knowledge: Data Structures & Algorithms, Operating Systems, Computer Networks, Database Systems, System Design

Programming Languages: Python, C++, Java, Go, TypeScript, Dart, C

Cloud & DevOps: Google Cloud Platform, Azure, Docker, Git

Databases: MySQL, MongoDB, Firebase (Firestore), Supabase, Convex

Frameworks & Libraries: React, Next.js, Flutter, Node.js, FastAPI, Flask, Tailwind CSS, Socket.IO

AI & Data Technologies: PyTorch, TensorFlow, Hugging Face, LangChain, NLP, LLMs, Retrieval-Augmented Generation (RAG), GraphRAG, Model Context Protocol (MCP)

Areas of Interest: Agentic AI, Machine Learning, Deep Learning, Distributed Systems, Web & Mobile Development

Projects

Raseed | Flutter, Google Wallet API, Document AI, Places API, GCP, Gemini API

GitHub

- Developed a **Flutter app** to digitize and organize receipts, warranties, and gift cards into **Google Wallet**, enhancing accessibility and traceability.
- Designed intelligent agents including a **Reminder Agent** (Google Calendar alerts), **Pass Generator**, **Knowledge Graph Builder** for financial insights, and an **EcoSpend Agent** leveraging Google ADK + Places API for sustainable purchases.

CodeProctor | Next.js, TypeScript, Docker, Node.js, Convex, AWS

GitHub

- Engineered a full-stack platform for conducting **technical coding interviews**, integrating a **Next.js frontend** with a scalable Node.js backend.
- Implemented secure, containerized **code sandboxes** using Docker for isolated execution with enforced resource limits and input sanitization.
- Automated deployment using **GitHub Actions CI/CD** and cloud containers on AWS, enabling rapid iteration and high availability.

LegalSphere | Flutter, RAG, BNS, GTranslate, DeepSeek API

GitHub

- Built a **Flutter mobile app** with an AI-powered Voice based legal chatbot using **RAG** and **BNS** as the core database, offering multilingual support and simplified law explanations.
- Integrated **image analysis** for harassment evidence, and designed guided workflows for filing cases and accessing resources to enhance **women's legal accessibility** in India.

GoDo | Go, WebSockets, Concurrency

GitHub

- Developed a high-performance **CLI tool in Go** for WebSocket load testing, simulating thousands of concurrent connections with goroutines, channels, and optimized concurrency control.
- Implemented detailed **performance metrics** (RPS, latency percentiles, throughput, error rates) with ASCII visualization, history persistence, and scalable load generation.

Achievements

- Awarded **Breakthrough Concept by Google at Agentic AI Day** – Selected as a top student team among 700 finalists from 9,100+ submissions out of 57,000+ developers. [\[View\]](#)
- Secured **3rd Place in Gen AI x Gender Technology Hackathon** – Recognized for innovation in responsible and inclusive AI. [\[View\]](#)
- Solved **800+ Coding Problems** on LeetCode to strengthen data structures and algorithms. [\[Profile\]](#)

Publications

LSTM-Driven State of Charge Estimation for Battery Management

Dec 2024

2024 IEEE 11th Power India International Conference (PIICON), Jaipur, India

- Published research on using **LSTM networks** for accurate state-of-charge prediction in electric vehicle batteries. DOI: [10.1109/PIICON63519.2024.10995078](https://doi.org/10.1109/PIICON63519.2024.10995078)