

KARTHIK RAMESH

AI Product Engineer | Agentic AI, RAG & 0→1 Products

+61 423692082 | Sydney, Australia | karthikramesh2012@gmail.com | LinkedIn | GitHub

PROFILE

AI product engineer and 0→1 builder specialising in agentic systems, RAG, MCP and full-stack AI products. Took an enterprise AI platform from 100+ customer interviews to live beta with five pilot customers, owning product strategy, system architecture, evaluation and engineering delivery.

SKILLS

Agentic AI & LLM Systems: Agent orchestration, agentic workflows, RAG, hybrid retrieval, reranking, embeddings, vector search, tool calling, MCP, context engineering, prompt engineering, grounding, citation verification, LLM evaluation, regression testing.

Full-Stack & APIs: Python, TypeScript, SQL, FastAPI, Pydantic, Node.js, React, Next.js, REST APIs, PostgreSQL, pgvector, Redis, Prisma, BullMQ.

ML & Multimodal: NLP, computer vision, speech recognition, deep learning, model training and evaluation, PyTorch, Hugging Face, scikit-learn, Pandas, NumPy, data visualisation.

AI Platform & Reliability: Docker, CI/CD, Git/GitHub, JWT/RBAC, audit logs, observability, sandboxing, security scanning, workflow automation, OpenAI, Anthropic and Groq APIs, Supabase, Railway.

Product Building: 0→1 product development, customer discovery, product strategy, rapid prototyping, requirements shaping, workflow design, evaluation design and pilot delivery.

EXPERIENCE

Founder / AI Builder in Residence

Arrayah & SH1P Australia

Mar 2026 – Jun 2026

Startup-backed venture, Sydney

- Architected and shipped **Orchestra**, a citation-grounded AI knowledge platform that turns meetings, documents, conversations and code into searchable product memory.
- Designed hybrid retrieval and reranking across structured and unstructured sources; built a 148-case evaluation suite covering relevance, grounding and regression detection.
- Built an **MCP server** and 17 read-only integrations across Slack, GitHub and Google Drive, enabling Cursor, Claude and Codex to retrieve project context.
- Took the product from concept to live beta through 100+ customer interviews and five pilot customers, owning product discovery, AI architecture, backend delivery and strategy.

AI & Automation Engineer

KRSP Tech

Feb 2026 – Mar 2026

Sydney, Australia – Contract, Hybrid

- Built a privacy-first AI resume-screening system using section-aware scoring, dynamic weighting and semantic clustering to rank candidates by role fit rather than keyword overlap.
- Designed an explainable LLM refinement layer for candidate scoring, summaries and interview prompts while keeping document processing local and every score auditable.

Artificial Intelligence Intern

Aavaaz Inc

Dec 2024 – Jan 2025

Chicago, USA – Remote

- Engineered NLP and speech-recognition pipelines for a real-time voice-to-voice translation system, reaching 97% language detection accuracy and improving contextual translation quality.

Artificial Intelligence Intern

Continental Automotive

May 2024 – Oct 2024

Bengaluru, India – On-site

- Built and tested a real-time CNN-based terrain-detection system combining camera and sensor data for automotive safety.
- Deployed a RAG chatbot over internal engineering documentation, adopted by 3,000+ employees for software-testing FAQs.
- Automated airbag-testing documentation in Python, reducing manual effort by roughly 95%.

SELECTED PROJECTS

LaneOrchestrator | Python, Agent Orchestration, CI/CodeQL

Designed and open-sourced a risk-aware control plane for Codex that analyses task and repository context, routes work across specialised model lanes, selects from 172 expert agents, and enforces auditable, verified handoffs.

Enterprise AI Data Analyst & Forecasting Copilot | FastAPI, Next.js, DuckDB, SQLGlot, MLflow

Developed a governed analytics copilot that turns natural-language questions into reviewable SQL, visualisations, churn analysis, forecasts and reports, secured by immutable approval binding, RBAC, audit trails and execution budgets.

ReplayOS | FastAPI, PostgreSQL, OpenAI, Next.js

Created an AI workflow control plane where models propose and deterministic policy governs, with exact-bound approvals, idempotent execution, hash-chained traces, postcondition verification, recovery, replay and redacted evidence exports.

Enterprise Agentic Knowledge Intelligence Platform | FastAPI, Next.js, pgvector, Redis, Docker

Built a role-aware RAG workspace that turns approved documents into grounded answers with citation verification, confidence scoring, human review, deterministic evaluations, agent traces and audit logs.

EDUCATION

Master of Data Science and Innovation, University of Technology Sydney

2025 – 2027

Bachelor of Engineering, BMS College of Engineering

2020 – 2024

RECOGNITION

- Selected across Venture backed Startup Accelerators Arrayah Accelerator Chapters 3 & 4 and SH1P Australia Cohort 1.
- Showcased the AI-Enhanced Terrain-Adaptive Vehicle Control System at Continental Innovation Day and submitted it to SAEINDIA International Mobility Conference 2024.