

AKASH RENUKA ASHOK

AI ENGINEER · APPLIED LLM & AGENTIC SYSTEMS · CO-FOUNDER & CTO
Melbourne, VIC, Australia | +61 431 136 629 | akashRashok@gmail.com | akashrenukaashok.com

PROFILE

Applied AI engineer and technical co-founder who takes LLM systems from problem scoping through architecture, guardrails, evaluation, deployment and post-launch ownership. Built and launched a live AI pet-health platform on iOS and Android now serving 110+ users, including agentic multi-step workflows, structured triage and non-diagnostic safety controls. Complementary delivery experience in finance and document automation, agent runtimes and AI evaluation infrastructure, plus postgraduate teaching at the University of Melbourne. Strongest where an ambiguous, manual workflow needs to become a reliable, observable product.

TECHNICAL SKILLS

AI Engineering: LLM APIs, prompt design, structured outputs, RAG and context assembly, embeddings, response validation, guardrails, hallucination and failure-mode analysis, evaluation pipelines

Agentic Systems: Tool calling, multi-step orchestration, Semantic Kernel, LangChain, context-window management, execution tracing, fallback chains, human-in-the-loop review

Languages: Python, TypeScript, JavaScript, C#, SQL

Backend & APIs: FastAPI, Node.js, .NET 8, Firebase Cloud Functions, REST APIs, request routing, retry and rate limiting, validation and error handling

Frontend & Mobile: React, React Native, Expo, Next.js, Vite, Tailwind CSS

Data: PostgreSQL, Supabase, Firestore, SQLite, Pandas, vector retrieval, document extraction

Cloud & Models: Azure OpenAI, Google Vertex AI, Firebase, Supabase, Vercel, Oracle Cloud; OpenAI, Gemini, Anthropic Claude, Ollama, LLaMA 3, Qwen 2.5

Automation & Reliability: n8n, UiPath Document Understanding, Power Automate, Sentry, logging and tracing, prompt regression testing, latency and token optimisation

Product & Delivery: Figma, PRDs, user flows, acceptance criteria, Linear, agile delivery, technical documentation, stakeholder communication

PROFESSIONAL EXPERIENCE

Co-Founder & Chief Technology Officer

Jun 2025 - Present

PawHealthAI | Melbourne, Australia

- Built and launched an AI-powered pet health platform on iOS and Android across Australia, the US, Canada, New Zealand and the UK, growing from zero to 110+ users.
- Architected Evie, the platform's AI assistant, spanning conversational guidance, structured symptom triage, weekly wellbeing check-ins and longitudinal pet context.
- Implemented multi-step agent workflows with context retrieval, custom tool execution, structured output schemas, validation layers and fallback handling.
- Designed non-diagnostic safety controls including concern classification, urgency routing, prompt-injection checks, post-generation sanitisation and hard constraints against diagnosis or prescription.
- Reduced pet-history retrieval latency from roughly 700 ms to roughly 100 ms through parallelised queries and backend optimisation.
- Built backend services in TypeScript, Node.js, Firebase Cloud Functions, Supabase PostgreSQL and Vertex AI / Gemini; shipped mobile in React Native and Expo and web in React, Vite and Tailwind CSS.
- Owned production infrastructure, release management, monitoring with Sentry, DNS and SSL configuration, and incident response.
- Authored PRDs, safety standards and operational runbooks, and coordinated two interns plus a social media manager through delivery.
- Secured distribution via Beny, an employee-benefits platform, and built a dedicated KPMG employee pet-care benefit proposal and flow; completed the SMEC AI Accelerator and MEC Discover.

AI Automation Engineer (Contract)

Jul 2025 - Jan 2026

Kodora.ai | Remote / Melbourne, Australia

- Built Python components to extract, format and validate structured information from accounting, finance and operations documents.
- Delivered automation for invoice generation, financial-summary generation and accounting-query workflows using Azure OpenAI, REST APIs, cloud functions and structured outputs.
- Implemented retry logic, rate limiting, input validation and structured error controls so pipelines degraded predictably rather than failing silently.

- Converted vague operational pain points into scoped prototypes by weighing data availability, integration effort, reliability risk and business value with stakeholders.

Project Mentor & Academic Grader (Casual Academic)

Feb 2025 - Present

University of Melbourne | School of Computing and Information Systems

- Mentors postgraduate teams through semester-long software projects (COMP90082), guiding scoping, architecture, technical feasibility, iterative delivery and risk management.
- Grades postgraduate coursework in Software Processes and Management (SWEN90016) against formal rubrics covering lifecycle models, agile and Scrum practice, and project governance.
- Delivers structured, constructive written feedback to students across widely mixed technical backgrounds.

Entrepreneurship Coach

Feb 2024 - Nov 2025

First Pivot | Melbourne, Australia

- Facilitated innovation and entrepreneurship programs for secondary students, including Lauriston Girls' School and multiple student ventures.
- Ran workshops on problem solving, technology concepts and early-stage business thinking, structured around staged deliverables and feedback cycles.

SELECTED PROJECTS

Azure Agent Runtime & Evaluation Platform C#, .NET 8, Semantic Kernel, Azure OpenAI, FastAPI, PostgreSQL Feb 2026

Modular runtime for orchestrating tool-enabled agents with structured permissions, session and context-window management to control token use, execution tracing, prompt-regression and safety-validation pipelines, REST APIs and telemetry.

Enterprise AI Evaluation Framework Python, Azure OpenAI, PostgreSQL, FastAPI Jan 2026

Reusable evaluation layer for generative AI systems: standardised quality metrics, output-validation pipelines, failure-mode classification and detection of silent performance degradation, exposed so multiple use cases can register and receive telemetry.

ArkLens: Development Finance Review Assistant Next.js, TypeScript, Zod, Ollama with OpenAI / Claude / Gemini adapters 2026

Credit-review assistant for real-estate lending teams that separates deterministic calculation from AI narrative. Computes contingency, presales gaps and loan-term buffers, applies rules and due-diligence checks, then generates a source-linked review memo with the human reviewer in control.

AI Financial Auditor & Cost Control Tool Python, FastAPI, OpenAI, PostgreSQL, Next.js Apr 2026

Combines deterministic checks with AI reasoning to surface duplicate payments, abnormal spend patterns and vendor anomalies, returning structured risk flags with evidence snippets, confidence indicators and review recommendations on a dashboard.

Guidly: AI Misconception Feedback for Education Next.js, Ollama, LLaMA 3, Qwen 2.5, SQLite Jan 2026

Open-source, privacy-first formative feedback tool that uses constrained generation to identify learner misconceptions and explain them, rather than assigning a binary grade.

Autonomous Driving with PID Control Python, PID control, vehicle dynamics simulation, Foxglove Studio 2024

Tuned steering and speed control for cone following, lane keeping and lane changes on progressively complex roads, averaging roughly 95.3 km/h within an 80 to 120 km/h target band while handling simulation noise and sensor latency; benchmarked MPC, PPO and SAC alternatives.

EDUCATION

Master of Information Technology, Major in Artificial Intelligence

Feb 2023 - Dec 2024

The University of Melbourne | Melbourne, Australia

- Discipline Merit Award, School of Computing and Information Systems.
- Coursework: Machine Learning, AI Planning for Autonomy, Machine Learning Applications for Health, Ethics of Artificial Intelligence, AI for Robotics, Security Analytics, Software Processes and Management.

Bachelor of Technology, Computer Science and Engineering

Jun 2018 - Jul 2022

Rajagiri School of Engineering and Technology | Kochi, India

- GPA 8.19 / 10. Creative Lead, Innovation and Entrepreneurship Development Centre.

ADDITIONAL

Earlier experience: Growth Strategy & Stakeholder Engagement Lead, Chrysaor Pty Ltd; Software Intern (ADAS for commercial vehicles), Ashok Leyland; Graphic Designer Intern, Creative Coconut.

Volunteering: The Couch, The Salvation Army, Melbourne (Sep 2024 to present), supporting international students in accessing resources and support services.

Work rights: Australian Temporary Graduate visa (Subclass 485), full working rights.