

Gareth Beall

Lead AI/ML Engineer

Clinical pharmacist turned AI engineer. I ship RAG in healthcare, where safety and evals are non-negotiable and every pipeline stage has to survive scrutiny.

Sunshine Coast, Queensland, Australia | gareth.beall@gmail.com | [LinkedIn](#) | [GitHub](#) | garethbeall.com

PROFILE

Lead AI/ML engineer with six years of hands-on AI and machine-learning engineering, and fifteen years of clinical pharmacy practice, including intensive care. Many people have built RAG applications; very few have shipped one in a healthcare environment, where safety and evaluation are critical and every part of the pipeline has to be scrutinised, picked apart, and tuned to state of the art. That is exactly what I did with IRIS at Queensland Health.

EXPERIENCE

Lead AI/ML Engineer / Sunshine Coast Hospital and Health Service

February 2025 to present | Hybrid, Sunshine Coast, Queensland

- Conceived and built the initial IRIS clinical RAG system, then led its engineering into a governed Queensland Health delivery context for clinical evaluation and user acceptance testing.
- Built auditable ingestion for PDF, Word, and web content, including text, tables, images, source identity, version detection, and quarantine paths for material that should not be retrieved.
- Built hybrid lexical and semantic retrieval, reranking, row-level table retrieval, citation continuity, and evaluation against realistic clinical questions.
- Operate self-hosted model-serving and document-processing workloads on GPU infrastructure, covering containers, model loading, concurrency, health, latency, and throughput.
- Treat prompts, retrieval, reranking, and model changes as experiments, using clinician-graded and automated evaluations to study failures and decide what to change next.
- Built the surrounding delivery system across APIs, workers, queues, PostgreSQL, object storage, administration tools, audit records, observability, migrations, backup, restore, and controlled releases.

Founder and Software Engineer / E2 Apps

September 2022 to present | Remote, Sunshine Coast, Queensland

- Built and operate Opioid Conversion Calculator, a focused medication-safety product for health professionals, including its clinical content, Flutter app, backend, analytics, subscriptions, releases, monitoring, and support.
- Shipped Namely, a preference-led baby-name discovery product, and My Restored Photo, an AI-assisted photo-restoration service with uploads, processing, editing, payments, private storage, and scheduled deletion.

Founder and AI Engineer / Inky Health

August 2026 to present | Remote, Sunshine Coast, Queensland

- Develop private, self-hosted document AI for health and government settings where sensitive data cannot leave the organisation's network, including document search, structured extraction, redaction, and agent workflows.

SELECTED SYSTEM

IRIS / Clinical AI assistant for Queensland Health

IRIS is an AI assistant Gareth conceived and built for clinicians at Queensland Health. Staff ask a question in plain language and IRIS answers from the health service's own approved documents. Every answer shows its exact sources, and when the evidence isn't there, IRIS says so.

WHAT IT DOES	Answers clinical questions from approved local documents, with the supporting passages shown beside every answer.
HOW IT WORKS	IRIS checks every document it ingests, searches by exact keywords and by meaning, and re-ranks the best passages before it writes an answer.
RUNS IN-HOUSE	The AI models run on the hospital's own GPU servers, so sensitive data never leaves the network.
BUILT TO BE SAFE	Tested against realistic clinical questions, including ones it should refuse. An honest "I don't know" beats confident guessing.
DELIVERED FOR REAL	Security review, user acceptance testing with clinicians, controlled releases, monitoring, and ongoing operations.

CAPABILITIES

Clinical RAG	Retrieval-augmented generation built for healthcare: grounded answers, citation continuity, honest abstention, and traceable evidence at every step.
Evaluation and safety	Clinician-graded and automated evaluation suites, guardrails, scope controls, and prompt-injection defence. Every pipeline stage gets measured before it ships.
Retrieval and data	Hybrid lexical and semantic search, embeddings, vector databases, reranking, OCR and document processing, PostgreSQL, and object storage.
Model serving	Self-hosted inference on GPU infrastructure with vLLM: model loading, concurrency, latency, throughput, health, and fine-tuning.
Software and operations	Python, TypeScript, APIs, workers, queues, Linux, Docker, Podman, CI/CD, monitoring, backup, and release management.

SELECTED PRODUCT WORK

Opioid Conversion Calculator <i>Clinical product</i> A medication-safety tool that puts specialist opioid-conversion knowledge into a focused, dependable interface for health professionals.	Inky Health <i>Health AI venture</i> Private, self-hosted document AI for health and government: search, structured extraction, and redaction for organisations whose data cannot leave their own network.
Namely <i>Consumer product</i> A baby-name app that learns what you like as you swipe, instead of handing you an endless list.	My Restored Photo <i>AI product</i> AI photo restoration. Send a damaged photograph that matters to you, get it back repaired.

EDUCATION

Bachelor of Pharmacy
The University of Queensland

2008

THIS RESUME RUNS AS A PLAYABLE COMMODORE 64 AT GARETHBEALL.COM. LOAD A TAPE, ASK THE AI ANYTHING.