

DANIEL LONG

Full-Stack Cloud & Cognition Engineer

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PROFESSIONAL SUMMARY

Full-Stack Cloud & Cognition Engineer who transitioned into software development in late 2024 after a long mechanical engineering career in safety-critical environments. Began learning from scratch through Google Academy, completing hundreds of hands-on labs and building early backend components, frontend layouts, and mobile-friendly UI systems directly into a portfolio site.

Early projects – a Text-to-Speech engine and a modular LMS – revealed a pattern: each tool solved a real problem but shouldn't exist in isolation. This led to ShellChronicle, a unified, modular, serverless journaling ecosystem blending semantic processing, encryption, cognitive UX, and multi-service cloud design. I build systems that think the way people think: structured, auditable, and designed for long-term reliability.

CORE SKILLS

Cloud & Backend

- Python, Guinorm, Flask
- GCP: Cloud Run, Firestore, Cloud Functions, IAM, Cloud Build
- Serverless architecture, multi-region design
- API design, secure cloud services

Frontend & UX

- Modular UI systems
- Responsive/mobile-first design
- Cognitive UX patterns
- Design tokens & overlays

Infrastructure & DevOps

- Terraform IaC
- CI/CD pipelines
- Identity layers & access control

Cognition & Systems Design

- Semantic tagging
- Glossary overlays
- Summary engines
- Encryption frameworks
- Audit logging

CERTIFICATIONS

Cloud & AI Certifications

- AWS AI Practitioner – Amazon Web Services
- AWS Certified Cloud Practitioner – Amazon Web Services
- Google Cloud Digital Leader – Google

Technical Courses & Skill Paths (Codecademy)

- Build Python Web Apps with Flask (Skill Path)
- Learn Python 3 • Learn Flask: Fundamentals
- Learn the Command Line • Introduction to Linux
- Building Interactive JavaScript Websites
- How to Make a Website (NameCheap)
- Code Foundations (Skill Path) • Learn to Code
- AWS Cloud Practitioner (Course Completion)

Industry & Mechanical Certifications

- Site Supervision Safety Training Scheme (SSSTS) – CITB
- Level 6 National Craft Certificate – Pipefitting / Plumbing / Mechanical Engineering

PROJECTS & PLATFORMS

ShellChronicle – Modular Cloud Journaling Ecosystem (2025–Present)

A unified, serverless journaling platform integrating all modular tools into one system.

Highlights:

- Semantic Tagging Engine • Glossary Overlay System
- AI Summary Mode • Audit-Grade Logging
- Modular Input Components • Cloud-Run Contact API
- Encryption Framework (Caesar + modular expansion)

Architecture: Cloud Run • Firestore • Cloud Functions • Terraform • IAM • Serverless pipelines

Portfolio Backend & Frontend System (Early 2025)

- Started with a simple static website as the foundation
- Custom backend entry box
- First frontend layout + mobile-friendly design
- Later redesigned as standards evolved

Text-to-Speech Engine (Early 2025)

- First cognition-focused project
- Later integrated into ShellChronicle's roadmap

Modular LMS (Early 2025)

- Lightweight learning system
- Reinforced modular backend/UI patterns
- Absorbed into ShellChronicle ecosystem

EXPERIENCE

Full-Stack Cloud & Cognition Engineer

Independent / Portfolio Development | 2025–Present

- Built ShellChronicle using serverless cloud architecture.
- Developed semantic processors, encryption modules, glossary overlays, and summary engines.
- Designed modular UI systems and cognition-driven interfaces.
- Implemented audit-ready logging and export pipelines.
- Created a scalable platform roadmap with multi-service integration.

Mechanical & Engineering Roles – Large-Scale Construction Projects

UK • Ireland • Australia | 2005–2024

- Worked across major commercial and infrastructure projects in mechanical and safety-critical environments.
- Held hands-on and supervisory roles, developing strong documentation, traceability, and operational clarity.
- Built a disciplined, reliability-focused engineering mindset that now informs cloud architecture and platform design.

TRAINING & PRACTICAL EXPERIENCE

- Completed hundreds of hands-on labs across cloud architecture, serverless design, Python, Terraform, IAM, and Firestore.
- Built deployable components including APIs, serverless functions, auth layers, and data pipelines.
- Applied lab experience directly into ShellChronicle's modular architecture.

KEY ACHIEVEMENTS

- Built a full cloud platform ecosystem (ShellChronicle).
- Passed AWS AI Practitioner certification.
- Designed a modular encryption framework.

- Created a multi-mode journaling interface with cognitive overlays.
- Built a serverless Contact API on Cloud Run.
- Developed a TTS engine and modular LMS.
- Designed a full portfolio showcasing cloud architecture and cognition systems.

ENGINEERING PHILOSOPHY

I build systems that are:

Modular • Cognitive • Integrity-Driven • Legacy-Grade • Cloud-Native

INTERESTS

Cloud architecture, cognitive UX, modular systems, encryption, terminal tooling, documentation design, platform engineering.