

# Matthew Heffernan

## Senior Systems Architect · Full Stack Engineer · Computer Scientist

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### PROFESSIONAL SUMMARY

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Senior Systems Architect and Computer Scientist with 20+ years on enterprise backends in C#/.NET and modern frontends in TypeScript/React. Track record shipping high compliance systems for national broadcasters, universities, and professional colleges, with recent work in AI tooling, RAG search, and workflow automation at scale. Principal architect at PolymorphicIT and lead developer on CorpRaiders (Unity multiplayer).

### CORE COMPETENCIES

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C# / .NET Core, TypeScript, React, Next.js, Node.js, Python, GraphQL, PostgreSQL, SQL Server · Event driven systems, microservices, multi tenant isolation · RAG pipelines, LLM orchestration, prompt engineering · Stripe Billing and Connect · AWS, Azure, GCP, Docker · SDLC, ITIL aligned change, mentorship

### PROFESSIONAL EXPERIENCE

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#### Principal Systems Architect

*PolymorphicIT · Sept 2025 – Present · Blue Mountains, Australia*

- Own solutions architecture and hands on full stack delivery across production web apps, multi tenant cloud systems, and API design.
- Run a solo practice with LLM assisted workflows for implementation speed, with architecture and code review kept tight.
- Shipped **Booka.work** (Jan–Apr 2026), a multi tenant booking SaaS on Next.js, PostgreSQL, Drizzle, and Stripe Connect. Tenancy enforced in app via Drizzle withTenant proxies and Next.js AsyncLocalStorage, plus platform subscriptions and Stripe Connect merchant flows. Paused to focus on CorpRaiders.

#### Founder & Lead Developer

*Split Personas · Oct 2025 – Present · Blue Mountains, Australia*

- **CorpRaiders** is a low latency multiplayer game in Unity (C#). Server authoritative state sync via **FishNet**.
- Evaluated several networking frameworks before settling on FishNet for time to market. Focus on C# system topology and performance.

#### Senior Software Engineer, Innovation Lab

*Australian Broadcasting Corporation · Sept 2022 – Sept 2025 · Sydney, Australia*

- Delivered a cross system AI wrapper as a Chrome extension so teams could test and roll out past org silos. Saved roughly six months of sprint capacity and saw fast newsroom adoption.
- Wrote a conversational RAG search UI in React/TypeScript over the national broadcast archive: multi turn chat, task orchestration, permissions, collaboration.
- Interactive React modules for Video Chapters on public ABC infrastructure peaked at **100k+ daily views**.
- Rolled out workflow automations with MS Power Automate and Power Platform across business units.

## Senior Solutions Consultant

*CauseIS · Mar 2020 – Aug 2022 · Sydney, Australia*

- Integrated iMIS CRM with Moodle LMS for the **College of Nurses (250,000 students)**: C# microservices, SQL stored procedures, custom APIs.
- Automated student/tutor allocations, workload tracking, and payment processing for large national member organisations.

## Information Systems Manager

*University of Sydney · Jul 2009 – Mar 2020 · Sydney, Australia*

- Ran core enterprise information systems: engineering, vendor compliance, database integrations, and legacy modernisation across major faculties.

## Contractor

*Artis Group · 2008 – 2009 · Sydney, Australia*

- Contract software development on client delivery projects in .NET and web stacks.

## Junior to Senior Developer

*Praxa Ltd · 2005 – 2009 · Sydney, Australia*

- Progressed from junior to senior developer building commercial .NET and web applications for client delivery.
- Owned features from requirements through implementation, testing, and production support.

## Computer Scientist / Toll Systems Engineer

*Q Free ASA · 2003 – 2005 · Sydney, Australia*

- Early underground cashless tolling: mobile data comms, traffic simulation, automated plate recognition.

## TECHNICAL SKILLS

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**Languages:** C#, .NET Core, TypeScript, JavaScript, SQL (SQL Server, PostgreSQL), Python, GraphQL, Node.js

**Frontend:** React, Next.js (App Router), TailwindCSS

**Backend & data:** Microservices, REST / Web APIs, Drizzle ORM, Entity Framework, Redis, vector DBs (Pinecone)

**Cloud & AI:** AWS, Azure, GCP, Docker, RAG, LLM orchestration, prompt engineering

## EDUCATION & CERTIFICATIONS

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- **University of Western Sydney**, Bachelor of Computer Science (Mathematics)
- **IBM**, Data Science Specialisation