

Daniel Olliver

Full-Stack Developer · AI Postgraduate · Quantum-Validated Research Portfolio

Auckland, New Zealand · daniel@danielolliver.com · danielolliver.com · github.com/dwatces · linkedin.com/in/danielolliver

PROFILE

Full-stack developer (~4 years, MERN/Next.js) who ships production software for real businesses — including a healthcare platform for a UK provider — paired with postgraduate AI training and a self-directed research program in quantum computing and geometric machine learning, validated on real IBM quantum hardware and published openly. I bring both halves to client work: rigorous, evidence-first engineering and the delivery skills to put it in production.

EXPERIENCE

Freelance Full-Stack Developer

2024 – present

Independent · Auckland (remote, AU/NZ/UK clients)

- Designed, built and shipped a production ADHD patient-assessment platform for a UK healthcare provider (React/Node stack, clinical workflows, deployment and handover).
- Build AI-assisted delivery pipelines (Claude-based agent workflows) for faster, test-backed full-stack development; private RAG/document-AI prototypes for professional-services use cases.

Independent Researcher — Quantum Computing & Geometric ML

2025 – 2026

Self-directed; open methods at danielolliver.com and github.com/dwatces

- Ran ~30 controlled experiments on lattice geometry in learning and quantum systems under a strict pre-registration-style discipline (controls, matched parameters, no result recorded before its run completed).
- Demonstrated topological order on real hardware: anyon creation and braiding statistics reproduced across **three IBM quantum processors** with error mitigation and cross-device error bars; measurement-based "magic-state" programming on a 6-qubit cluster (0.999 agreement with theory).
- Computed the Kitaev model's non-Abelian phase exactly (Chern numbers, Majorana zero modes, numerically braided exchange statistics); built symmetry-equivariant neural decoders for quantum error correction with ~4× sample-efficiency gains at matched parameters (stim / PyTorch / Qiskit).
- Shipped an interactive public demo — a true stabilizer simulation where visitors braid anyons in the browser: danielolliver.com/anyons.

Graduate Teaching Assistant

2024

University of Auckland

Junior Developer (intern → full-time)

2022 – 2024

3PM · Auckland

- Full-stack feature development and maintenance across React/Node products; API integrations and deployment workflows.

Developer Intern

2021

OutPace

EDUCATION

Postgraduate Certificate in Artificial Intelligence

2024

University of Auckland

BSc Computer Science

2021

Auckland University of Technology

SKILLS

- | | |
|----------------|--|
| Web | React, Next.js, Node.js, Express, TypeScript, MongoDB, Supabase, Stripe & API integrations, Firebase, Vercel, AWS, WordPress |
| AI / ML | Python, PyTorch, equivariant/geometric deep learning, RAG & LLM integration (Claude agent pipelines), rigorous experiment design |
| Quantum | Qiskit (real-hardware workflows, error mitigation), stim, stabilizer codes & QEC decoders, topological-order experiments |