Tim Child
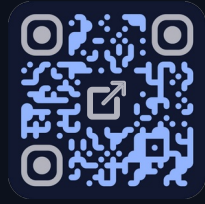## Full Stack Developer | PhD Physics

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Personal Statement

I build things — From the hardware and electronics to convert an SUV into a 4x4, lab equipment and analysis software to increase the rate of data acquisition and analysis by 1000x, to my most recent project: A full stack web application enables creating bespoke model–agnostic agentic workflows with cyclic graph processing utilizing custom retrieval augmentation and data pipelines.
I'm looking for challenging work with good colleagues.

Experience

Full Stack Developer	AthenaInstruments	2024 – 2025

Developed a full web application from scratch following [modern software development practices]. My work involved creating data pipelines, integrating third party APIs, working with cutting edge generative AI technologies, refactoring and structuring a medium sized (~50 K lines) codebase, automation of testing, developing continuous integration and deployment workflows, database management and migrations, provisioning cloud infrastructure, and more. The main tech stack was centered around the python ecosystem.

Researcher	Stewart Blusson Quantum Matter Institute, UBC, Canada	2018 – 2024

Spearheaded the development of an innovative measurement technique for nanoscale circuits that exhibit exotic quantum behaviors. Responsibilities included developing and fabricating quantum qubit devices using state–of–the art fabrication facilities, building custom hardware and software to acquiring and analyzing data (increasing throughput by ~1000x), commissioning, maintaining, and upgrading BlueFors dilution refrigerators to achieve world–class measurement conditions (electron temperatures at 0.02 C from absolute zero). I published papers in respected journals including the esteemed Physical Review Letters.

Teacher	University College London	2016 – 2017

Obtained a masters level teaching degree specializing in science education, including teaching in multiple London schools.

Private Tutor	London	2012 – 2018

Tutored students aged 4 – 18+ in math and sciences to fund my way through my undergraduate studies.

Education

- **PhD Physics**, University of British Columbia, QuEST Scholarship — 2018 – 2024
- **PGCE Science**, University College London, IOP Scholarship — 2016 – 2017
- **BSc Physics**, Imperial College London, First Class Honors — 2011 – 2014

Languages

- Python
- SQL
- Bash
- Javascript
- Lua
- Go
- C++
- Igor (C like Matlab)
- ...

Technologies

- Docker (+compose)
- Git
- Github Actions
- Flask + Dash
- FastAPI + Reflex
- UV (+ poetry)
- Postgresql
- Redis
- Qdrant
- Digital Ocean
- Cloudflare
- Langgraph + Langchain
- ...

Personal and Interests

- US/UK citizen
- Open work permit in Canada (PR pending)
- Arctic expeditions with the British Exploring Society
- Caving Exploration, Skiing, Ice climbing, Scuba diving