

# James McArthur

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Vancouver, Canada

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## WORK EXPERIENCE

Zetane Systems

September 2021 - Present

*Full Stack Developer*

*Vancouver, CA*

- Developed a **Next.js/React & TailwindCSS** SaaS platform where users can upload and execute ML code.
- Developed **Django + PostgreSQL** RESTful backend for user authentication and user data, and a **Redis & Kubernetes** system using **AWS EKS & EC2** to run QA code against ML models and datasets in **Dockerized** virtual environments.
- Managed the **CI/CD pipeline** via **Gitlab** integrated with **AWS S3** buckets.
- Developed a **Python API & CLI** tool (deployed on PyPi) that emulates the SaaS functionally.

*Tools: JavaScript, Python, HTML, React, Zustand, Next.js, TailwindCSS, AWS (S3, EKS, EC2), Django, PostgreSQL, Kubernetes, Docker, Redis, Cypress, Sentry, GIT, Microservice Architecture.*

McMillen Jacobs Associates

October 2018 - April 2021

*Structural Engineer*

*Auckland, NZ*

- Design Engineer, Client Representative and QA Engineer for Watercare's \$1.2bn Central Interceptor project.
  - Facilitated the successful delivery of the Mangere Tunnel Boring Machine Entrance Shaft.
- Design Engineer responsible for the structural design of a \$1m+ breakwater marina protection system.

Private Tutoring

January 2013 - Present

*Mathematics, Physics & Chemistry Tutor*

*Auckland, NZ & Vancouver, CA*

- Effectively communicate key ideas and concepts in a supportive, one to one, learning environment.

## PROJECTS

Swoldier Fitness | [www.swoldierfitness.com](http://www.swoldierfitness.com)

June 2022 - Present

- Developed a SaaS infrastructure including a **Node.js RESTful API** that serves exercise information to a frontend system coded in **Next.js & React**. Google's **Firebase** is used for data persistence (Firestore - **NoSQL** Paas) and user authentication.
- Intelligent algorithms and web infrastructure emulate personal training by generating thousands of personalized & highly effective workouts, complete with exercise descriptions, workout tracking, training analytics, training programs, at-home friendly workout generation, and stretching, physio-therapy and warm up generators.

*Tools: JavaScript, React, Next.js, TailwindCSS, Node.js, Firebase Auth, Firebase NoSQL, Netlify, Heroku, Stripe.*

## EDUCATION

The University of Auckland

March 2015 - May 2019

*BE(hons) in Civil and Environmental Engineering*

*Auckland, NZ*

- Recipient of the Concrete New Zealand - Precast Award for outstanding research on precast concrete.
- Course emphasis on complex mathematics, and structural and geotechnical design using steel, concrete, and timber for static and dynamic load cases.