# **James Bao**

## Career Objective

in /JamesNZL

//JamesNZL

Auckland, New Zealand jamesnzl.xyz

I'm chasing opportunities to grow my love for everything from analogue electronics to full-stack web development.

I love active problem-solving, and tinkering around with an ever-evolving project until it's exactly right. I enjoy loarning & social how technology can be applied to make effective solutions that improve human lives, whether

I love active problem-solving, and tinkering around with an ever-evolving project until it's exactly right. I enjoy learning & seeing how technology can be applied to make effective solutions that improve human lives—whether through software, hardware, or a beautiful combination of both.

I'm a driven, reliable team player with proven leadership skills, and a knack for effective communication. I'm always looking to learn new things and grow as a person—and I apply this mindset to everything I do.

### **☆ Skills Summary**

#### **Problem Solving**

- ▶ I'm a natural problem solver, and apply my strong logical thinking to challenging situations. I leave things better than I found them, working methodically to arrive at an optimal solution.
- ➤ I've created a personnel development framework, and implemented a digital workspace to consolidate data, administration, and procedures into a single source of truth.

#### **Communication Skills**

- ▶ I'm an effective communicator with an aptitude for breaking down challenging concepts.
- ▶ I help appreciative first-years by delivering intuitive explanations for difficult, technical concepts, and I tutored English, Maths, and Science at high school.
- ➤ I've acquired experience in presentation skills, public speaking, and self-confidence through my New Zealand Cadet Forces development courses.

#### Leadership

- ➤ I'm passionate about intent-based leadership and understanding each member's strengths and weaknesses—I strongly believe the whole is greater than the sum of its parts.
- ➤ I was a Prefect and Deputy House Captain at high school, a Cadet Warrant Officer Class Two in the NZCF, and led the House Haka in Years 11–13.
- ➤ I was appointed to be the Regimental Sergeant Major for a highly successful Recruit Training Course with units from across the Upper North Island.

#### **Teamwork**

- ▶ I strive to be an asset to any team, and try to morph into whatever role is in demand. I'm often counted on for my punctuality and reliability—I don't make promises I can't keep.
- ➤ I was a member of my high school's Premier Lacrosse and Premier Target Shooting teams, and know the importance of teamwork and collective buy-in.

## **Experience Summary**

Course Cadet StaffJul 2021New Zealand Cadet ForcesAuckland, NZ

#### **Freelance Software Developer**

2020 - 2021



#### **Bachelor of Engineering (Honours)**

2021 - 2024

The University of Auckland

- > Specialising in Computer Systems Engineering
- > Cumulative GPA of 8.2/9.0 (A)

## **Detailed Experience**

Course Cadet StaffJul 2021New Zealand Cadet ForcesAuckland, NZ

➤ A mentor and role model to the course of 50+ students

- > Aided Directing Staff in training delivery, student assessment, and welfare management
- > Maintained morale and esprit de corps
- > Applied my instructional technique and leadership skills to deliver a 'very efficient Final Parade'

#### **Freelance Software Developer**

2020 - 2021

- > Back-end development with JavaScript, Node.js, and MongoDB
- > Built a custom Discord bot tailored to streamline digital order management and processing

## **♥** Technical Skills

#### TypeScript/JavaScript

- > Front-end browser and back-end Node.js applications
- > Object-oriented and functional patterns
- > async/await, Promises, and callbacks
- > Serverless functions with Next.js and Cloudflare Workers

#### C/C++

- > Familiarity with Arduino-flavoured C++ and standard C
- > Learnt through high school Control Technology and University Engineering courses
- > Currently using C to develop firmware drivers for an ATmega328PB
- ➤ Used Arduino C++ for simple sensor reading and peripheral control functionality

#### Git/GitHub

- > Git version/source control and GitHub project management
- > Usage of feature branches, pull requests, issues, and GitHub Actions
- ➤ 3000+ contributions accrued over the past 4 years

Other Languages I also have limited experience in Python, Java, and MATLAB.

## **△** Project Experience

#### notion-assignment-import

2022

jamesnzl.xyz/notion-assignment-import

- Cross-browser extension that loads Canvas assignments into a Notion database
- ➤ 60+ users in under two months
- > Variety of tools including Gulp, Browserify & ESBuild, Sass, and PostCSS
- > Learnt more about APIs, HTTP and HTTP clients, and OAuth2
- > Git and GitHub

> Sass and PostCSS

> Insomnia

> TypeScript, HTML

> Gulp, Browserify, and ESBuild

## Smart Energy Monitor uoa-ece209.github.io

2022

> Smart energy monitor I am currently designing in a group of four

➤ Involves analogue circuit & PCB design, signal conditioning, using an ATmega328PB, writing firmware drivers, serial communication, and Bluetooth communication

> Git and GitHub

> Microchip Studio

> Altium Designer

> LTspice

> Proteus VSM

**Pronto** 2020 – 2021

#### aucklandarmycadets.github.io/Pronto

City of Auckland Cadet Unit

The University of Auckland

- > Full-featured Discord bot to streamline Unit procedures
- > Comprehensive codebase documentation with JSDoc
- > Experimenting with Cloud Computing services including DigitalOcean, Linode, Vultr, and currently Oracle Cloud

- JavaScript, Node.js
- **>** MongoDB

- **>** JSDoc
- > Virtual Private Servers

> SSH, Bash, Unix CLI

**Unit Website** 2022

github.com/aucklandarmycadets/aucklandarmycadets

City of Auckland Cadet Unit

- ▶ A modern, performant website to overhaul my Cadet Unit's online presence
- > Serverless functions with both Next.js and Cloudflare Workers
- Created my own CDN to cache Notion's ephemeral images and optimise performance
- Experience in managing DNS records, administering Google Search Console, and enhancing SEO
- ➤ Next.js (and React) with Vercel
- > Serverless functions
- > DNS Records, SEO

**Other Projects** More projects can be found on my GitHub profile.



#### 2021

> First in Course Award for ENGGEN 131: Introduction to Engineering Computation and Software Development

#### Pre-2021

- > School Prefect and Deputy House Captain
- > Bayonet of Honour
- ➤ Top of Course Award NZCF Senior Non-Commissioned ➤ First in Level 2 Programming Officer's Course
- > First in Level 3 Calculus
- > First in Level 2 Physics

## Interests

Youth Development I'm passionate about youth development, and I'm currently an Officer Cadet in the New Zealand Cadet Forces. This follows from five years as a cadet, including 17 months as a Cadet Warrant Officer Class Two.

**Outdoors** I have a deep love for the outdoors, and find it an amazing outlet to recharge my batteries.

**Teaching** I find immense satisfaction in teaching and mentoring other people—crafting coherent, intuitive explanations for difficult and technical concepts and seeing the all-rewarding lightbulb moment.

Te Ao Māori I care deeply about Te Ao Māori, and enjoy engaging with the indigenous culture & language of Aotearoa New Zealand.



#### **Captain James Green, NZCF**

Cadet Unit Commander

james.green@cadetforces.org.nz or +64 21 101 8020

City of Auckland Cadet Unit

James has been a significant mentor to me, and has heavily guided my development whilst a member of the NZCF.

Rebecca O'Gram Associate Principal

rog@westlake.school.nz

Westlake Boys' High School

Rebecca was my Year 13 Calculus teacher, and is one of the most influential teachers I have ever had.

#### Matua Johnny Waititi

Te Kaihautū o Te Puna

jwa@westlake.school.nz or +64 20 410 53400

Westlake Boys' High School

Matua Johnny was my Te Reo Māori kaiako & subsequent form teacher, and is another teacher that has played a massively pivotal role in my life.