

# James Bao

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## Career Objective

I am **chasing an internship** to grow my passion for **software** and **full-stack web development**.  
I want to **improve human lives**—whether through software, hardware, or a **beautiful combination of both**.  
I am 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 **apply** my strong **logical thinking** to challenging situations, and leave things **better than I found them**.

### Communication Skills

- › I am an effective communicator with an aptitude for **breaking down challenging concepts**.

### Leadership

- › I am passionate about intent-based leadership and **understanding** each member's **strengths and weaknesses**.

### Teamwork

- › I strive to **be an asset** to any team. I am known for my reliability—I **do not make promises I cannot keep**.

## Education

### Bachelor of Engineering (Honours)

2021 – 2024

The University of Auckland

- › **Computer Systems** Engineering
- › Cumulative GPA of 8.3/9.0 (**A-A+**)
- › Dean's Honours List

## Experience

### Embedded Software Engineer Intern

Nov 2022 – Mar 2023

Windcave Ltd

Auckland, NZ

- › Writing **C/C++ firmware** on a new STM32U585 **ARM** development board
- › **Rapid prototyping** of external **QSPI and OSPI** flash memories
- › **Creating** a simple **Point of Sale system** on CHU200TP payment terminal

### 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++

- › Experience with **C** and Arduino-flavoured C++
- › Learnt through **projects**, University Engineering courses, and **industry**
- › Used C to develop **OSPI memory drivers** for an **STM32U585**
- › Used Arduino C++ for simple sensor reading and **actuator control** functionality

### Git/GitHub

- › Fluency with **feature branches**, pull requests, issues, and GitHub Actions
- › **5300+ contributions** accrued over the past **5 years**

**Other Languages** I also have familiarity with **C#, Python, Java**, and **MATLAB**.

## Project Experience

### notion-assignment-import

2022

[jamesnzl.xyz/notion-assignment-import](https://jamesnzl.xyz/notion-assignment-import)

- › **Cross-browser** extension that loads Canvas assignments into a Notion database
- › **3800+ unique users** in **twelve months**
- › Variety of tools including **Gulp**, Browserify & ESBuild, **Sass**, and PostCSS
- › Learnt more about **REST APIs**, HTTP and HTTP clients, and **OAuth2**
- › Git and GitHub
- › Sass and PostCSS
- › Insomnia
- › TypeScript, HTML
- › Gulp, Browserify, and ESBuild

### Pronto

2020 – 2021

[aucklandarmycadets.github.io/Pronto](https://aucklandarmycadets.github.io/Pronto)

City of Auckland Cadet Unit

- › 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
- › JSDoc
- › SSH, Bash, Unix CLI
- › MongoDB
- › Virtual Private Servers

### Unit Website

2022

[github.com/aucklandarmycadets/aucklandarmycadets](https://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](#).

## Achievements

- › **First in Course Award** for ELECTENG/COMPSYS 209: **Analogue and Embedded Firmware Design**
- › **First in Course Award** for ENGGEN 131: Introduction to Engineering Computation and **Software Development**
- › **Dean's Honours List 2022**
  - › School Prefect and Deputy House Captain
- › Bayonet of Honour
  - › First in Level 3 Calculus
- › Top of Course Award
  - › First in Level 2 Physics
  - › First in Level 2 Programming
- › NZCF Senior Non-Commissioned Officer's Course

## Passions

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

**Teaching** I love crafting intuitive explanations for difficult, technical concepts—and seeing the lightbulb moment.

**Te Ao Māori** I care deeply about embracing the indigenous culture & language of Aotearoa New Zealand.

**Youth Development** I am currently an Officer Cadet in the New Zealand Cadet Forces. I was previously a cadet for 5 years, including 17 months as a Cadet Warrant Officer Class Two.

## References

### Weili Liu

[weili.liu@windcave.com](mailto:weili.liu@windcave.com)

Embedded Development Manager

Windcave Ltd

Weili has been a **significant mentor** and **guided** me closely during my internship.

### Rebecca O'Gram

[rog@westlake.school.nz](mailto:rog@westlake.school.nz)

Associate Principal

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

[jwa@westlake.school.nz](mailto:jwa@westlake.school.nz)

Te Kaihautū o Te Puna

Westlake Boys' High School

Matua Johnny was my Te Reo Māori **kaiako** and **form teacher**, and has also played a **pivotal** role in my life.