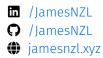
# **James Bao**

james@jamesnzl.xyz +64 22 410 1580 Auckland, New Zealand



## **©** Career Objective

I am chasing an internship to grow my love for everything from analogue electronics to full-stack web development.

I want to improve human lives—whether through hardware, software, 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 8.25/9.0 (A)

> Dean's Honours List

## **Experience**

#### **Embedded Software Engineer Intern**

Nov 2022 – Mar 2023 Auckland, NZ

Windcave Ltd

- > Writing C/C++ code 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

#### **Electronics and Embedded Systems**

- ➤ Analogue circuit & PCB design learnt through practical application
- > Extensive hands-on experience with soldering and using multimeters & oscilloscopes
- > Familiarity with LTspice, Microchip Studio, Proteus VSM, and Altium Designer
- > Experience writing firmware for Atmel megaAVR and ARM Cortex-M33

#### 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

#### Git/GitHub

- > Fluency with **feature branches**, pull requests, issues, and GitHub Actions
- > 4400+ contributions accrued over the past 5 years

Other Languages I am also experienced with C/C++, and have familiarity with VHDL, C#, Python, Java, and MATLAB.

## notion-assignment-import

jamesnzl.xyz/notion-assignment-import

- > Cross-browser extension that loads Canvas assignments into a Notion database
- > 2300+ users in under six months
- > 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** 

**2022** The University of Auckland

2022

cs209.jamesnzl.xyz

- > Smart energy monitor I designed in a group of four
- ➤ Analogue circuit & PCB design, signal conditioning, using an ATmega328PB, writing firmware drivers, and UART & Bluetooth communication
- ► Lecturer's Choice for **Top Team**
- LTspice

▶ Proteus VSM

▶ Git and GitHub

▶ Microchip Studio

Altium Designer

**Pronto** 2020 – 2021

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

City of Auckland Cadet Unit

- > A modern, performant website to overhaul my Cadet Unit's online presence
- > Created my own CDN to cache Notion's ephemeral images and optimise performance
- ▶ Next.js (and React) with Vercel
  ▶ Serverless functions
  ▶ DNS Records, SEO

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

## **Y** 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
- > First in Level 3 Calculus
- > First in Level 2 Physics
- > First in Level 2 Programming

NZCF Senior Non-Commissioned Officer's Course

**References** 

> Bavonet of Honour

> Top of Course Award

Weili Liu Embedded Development Manager

weili.liu@windcave.com

Windcave Ltd

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

#### **Duleepa J Thrimawithana**

Senior Lecturer

d.thrimawithana@auckland.ac.nz

The University of Auckland

Duleepa invited me to be a COMPSYS 209 **Teaching Assistant** and to assist with his **Smart Car workshop** at Mānawa Mai **Open Day**, based on my **technical proficiency** and **communication skills**.

#### Matua Johnny Waititi

Te Kaihautū o Te Puna

jwa@westlake.school.nz

Westlake Boys' High School

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