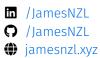
# **James Bao**



# **©** Career Objective

I am chasing an internship to grow my love for analogue electronics and embedded systems.

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**

> Lapply 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

> Specialising in **Computer Systems** Engineering

> Cumulative GPA of 8.2/9.0 (A)

# **Experience**

Course Cadet Staff

Jul 2021

New Zealand Cadet Forces Auckland, NZ

- > Selected to staff the Northern Area Junior Non-Commissioned Officer's Course 04/21
- ➤ 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

## **P** 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 EasyEDA
- > Experience writing firmware for Arduino and ATmega328PB Xplained Mini

#### C/C++

- > Familiarity with **Arduino**-flavoured C++ and standard C
- > Learnt through **projects** in high school 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

- > Usage of **feature branches**, pull requests, issues, and GitHub Actions
- > 3000+ contributions accrued over the past 4 years

**Other Languages** I am also highly proficient in **TypeScript/JavaScript**, and have limited experience in **Python**, **Java**, and **MATLAB**.



Smart Energy Monitor 2022

uoa-ece209.github.io

The University of Auckland

Westlake Boys' High School

- > 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, and UART & Bluetooth communication
- ▶ Git and GitHub

▶ Microchip Studio

▶ Altium Designer

▶ LTspice

▶ Proteus VSM

## **Automatic Peg Cleaner**

2020

jamesnzl.xyz/13cte

- > **Self-directed** Year 13 Control Technology project
- > Learnt about **embedded systems**, MOSFETs, capacitors, diodes, **circuit and PCB design**, 3D modelling, 3D printing, and **firmware development** through **practical application**

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

# **P** Achievements

- > First in Course Award for ENGGEN 131: Introduction to Engineering Computation and Software Development
- > Bayonet of Honour
- > Cadet Warrant Officer Class Two
- ➤ Top of Course Award NZCF Senior Non-Commissioned Officer's Course
- > School Prefect and Deputy House Captain
- > First in Level 3 Calculus
- > First in Level 2 Physics
- > First in Level 2 Programming

# **9** Interests

**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 engaging with 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.



#### 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**, and has heavily **guided** my growth as a person.

Rebecca O'Gram

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**

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 and form teacher, and has also played a pivotal role in my life.