**Ivan Fateev**

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**SUMMARY**

Computer Systems Engineer who thrives on solving complex problems at the hardware/software intersection, seeking to apply my expertise within an engineering team.

**PROJECTS**

[**1ST PLACE GOVERNANCE CHALLENGE - WEB3 HACKATHON**](https://github.com/se-camus/2025-web3-hackathon)Solidity, *Chai, Git, Web3*

* **1st place** against 40% industry professionals in the Governance Challenge at NZ’s first Web3 Hackathon, building the backend for a decentralised voting system within **36** hours, earning **$4000** NZD
* Wrote **10+** unit tests to ensure functionality and reliability across code changes and deployments

[**3D SPATIAL MAPPING SYSTEM**](https://github.com/ivanf-nz/realtime-mesh-renderer)*C++, Arduino, Python*

* Engineered a high-speed 3D spatial mapping system on Arduino UNO, capturing approximately 100,000 points per scan at 250Hz using **LiDAR** and stepper motors
* Programmed low-level **C++** code to control stepper motors via I2C, synchronise LiDAR sampling with motor movement, and implement calibration routines to eliminate stepper motor errors
* Collected LiDAR data and controlled stepper motor timing using C++ on Arduino, with **Python** scripts used for point cloud processing, data cleaning, and conversion to .xyz format

[**PERSONAL PORTFOLIO WEBSITE**](https://ivanf.nz/)*React, Typescript, Tailwind, Git*

* Built and deployed a custom terminal-style website using Vercel, Next.js, and **TypeScript** enabling real-time command processing and dynamic rendering of README.md files from GitHub API hosted on a personalised domain
* Ensured responsive design for mobile and desktop with terminal-like interface and managed codebase using **GitHub** with 50+ commits showing continuous improvements and smooth functionality

[**3D TO ASCII RENDERER**](https://github.com/ivanf-nz/x2ascii)*Python, Git*

* Built a Python tool to render .obj 3D models as ASCII in the terminal with custom projection, shading, face-sorting using argument parsing and OOP structure
* Leveraged NumPy for fast transformations, with efficient data storage and robust error handling

**EDUCATION**

**UNIVERSITY OF AUCKLAND**

Bachelor of Computer Systems Engineering (Honours) *Expected Nov 2027*

Cumulative GPA: 8.33/9; **2024 Dean's Honours List** (top 5% performance or 8.25+ GPA)

Relevant Coursework:

Fundamentals of Computer Eng

Object-Oriented Programming

Intro to Eng Computation and Software Development

Fundamentals of Electrical Eng, Electrical and Digital Systems

**WORK EXPERIENCE**

**CHILLED/FROZEN ASSISTANT** *Auckland*

New World NZ *Oct 2022 – Feb 2024*

* Successfully trained **3** new team members on procedures and workflow
* Built solid communication and problem-solving skills dealing with **50+** customers a day

**CORE SKILLS & COMPETENCIES**

**TECHNICAL EXPERTISE:** Python, C++, Java, JavaScript, TypeScript, Git, Arduino & ESP32

**PRACTICAL INTERESTS:** Underwater Hockey, Water Polo, PCB design, 3D Modelling