

# Louis Lin

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## Bio

Formal education in statistics and machine-learning. Self-taught in web development. Passion for design.

With a degree in Engineering Science, I have spent several years on software-related work, such as mathematical modelling, machine learning, data science, and web development. Nowadays, I work on full-stack web development with a heavy emphasis on front-end due to my strength in graphic design.

## Experience

### VXT

Software Engineer  
Christchurch, NZ  
June 2022–Feb 2023

VXT is a B2B startup that focuses on communication solutions for small-to medium-sized businesses globally. I built end-to-end integrations with various software—which included coordination with integration partners, API authorisation, database migrations, middleware and UI implementation. Additionally, I supervised a summer intern for the entire duration, and worked on several miscellaneous front-end redesigns, refactors, and rebuilds.

### CreateBase

Co-Founder & Web Dev  
Auckland, NZ  
Dec 2019–Mar 2022

CreateBase was an EdTech startup that leveraged 3D simulations and programming tools to make tech education more accessible for schools. I worked on various tasks—from customer engagement, to product design, to implementation, but primarily focused on web development. HTML/CSS/Javascript and React were all self-taught to develop the website and app. We won first place in NZ for Red Bull Basement 2020, a global competition for university innovation, entrepreneurship, and startup ideas.

### Fisher & Paykel Technologies

ML & Data Analytics Intern  
Auckland, NZ  
Nov 2019–Feb 2020

I was tasked with improving prediction accuracy of horizontal-axis washing machine run times. I collaborated with the product design team to understand the sampled signal data, then preprocessed, imputed, and feature engineered using Boruta random forest, XGBoost, and lasso regression. The extracted data was used to train a deep neural network. All programmes were written in R.

### National Tsing Hua University

Applied Deep RL Intern  
Hsinchu, TW  
Nov 2018–Jan 2019

I applied deep reinforcement learning to robotic arms for improved efficiency in precision manufacturing. The agents were trained with a deep Q-learning policy using PyTorch and simulated in CoppeliaSim (written in Lua). I implemented a server-synchronous interface between client and server using the native simulation remote API.

### Kessler

Tether Operations Crew  
Auckland, NZ  
Aug 2018–Oct 2020

Kessler is a student-run project aimed at launching a 1U CubeSat into LEO to verify the feasibility of electrodynamic tethers for rapid deorbiting. I wrote MATLAB code to calculate the power budget based on GMAT orbital simulations, and calculated accelerometer specs based on hardware, atmospheric drag, and plasma density in LEO. I also wrote the Orbital Debris Mitigation Plan for the mission.

## Education

### The University of Auckland

Master of Science in Computer Science  
Second class honours  
2021–2022

Bachelor of Engineering (Honours) in Engineering Science

First class honours (8.6/9 GPA)  
2017–2020

## Awards

### Sir Colin Maiden Scholar

Dean's Leadership Programme 2020

### Red Bull Basement NZ Winner

Global university innovation competition 2020

### First in Course Award

COMPSCI 762 2020  
ENGSCI 403 2020  
ENGSCI 314 2019

### Dean's Honours List

Faculty of Engineering 2020, 2019, 2018, 2017

## Skills

Git version control, OAuth 2.0, performance optimisation, type-checking, communication

Building predictive models, data pre- and post-processing, feature engineering, statistical analysis

User research, product design, rapid prototyping, graphic design, videography/editing

## Tools

TypeScript / JavaScript	Python	Figma	Premiere Pro
React / React Native	R	Photoshop	After Effects
HTML / CSS / SASS	MATLAB	Weka 3	Illustrator
Markdown	Lua	Microsoft VBA	Lightroom