Louis Lin

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Formally-educated in machine learning.

Self-taught in web development.

Articulate in design.

Experience

CreateBase
Co-Founder & Web Dev

Auckland, NZ
Dec 2019–Mar 2022

CreateBase is an EdTech startup that leverages 3D simulations and programming tools to make robotics 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/JS and React were all self-taught to develop the website and app.

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 launching a 1U CubeSat into space 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

Pending examination
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 — 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 operations, effective communication, JS performance optimisation, strict type checking

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