LOUIS LIN

ENGINEERING SCIENCE UNDERGRADUATE

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louis-cf-lin.github.io

ABOUT

I am a fourth-year Bachelor of Engineering Honours student specialising in Engineering Science at The University of Auckland. I enjoy actively working with others who are like-minded and passionate. I aspire to work in the field of machine learning and the broader AI industry. My main goal is to make a positive difference in the world through human-to-AI interface technologies.

SKILLS

GENERAL
Python, MATLAB, C, JavaScript, V-REP

DATA
R, WEKA, VBA

CAD
SolidWorks, Autodesk Inventor, PTC Creo

COLLAB
Git, Slack, Trello, Twist

MISC.
LaTeX, HTML, CSS/SASS, Markdown, PhotoShop Premiere Pro, After Effects, Lightroom, MS Office

REFERENCES

Matheus Bevilaqua
Head of Research | Fisher & Paykel Technologies
matheus.bevilaqua@gmail.com

Professor Hung-Yin Tsai
Distinguished Professor | National Tsing Hua University
hytsai@pme.nthu.edu.tw

Jonathan Mace
Team Lead | Kessler
jjemace@gmail.com

WORK EXPERIENCE

Fisher & Paykel Technologies *Auckland, NZ*
AI & DATA ANALYTICS INTERN *Nov 2019 - Feb 2020*
- Preprocessed and imputed data in R
- Performed feature extraction using random forests, Boruta, XGBoost on large datasets
- Implemented *Keras* deep neural networks to predict out of balance in washing machines

National Tsing Hua University *Hsinchu, Taiwan*
POSTGRADUATE AI RESEARCHER *Nov 2018 - Jan 2019*
- Implemented deep reinforcement learning for efficient screwing with robotic arms
- Trained a deep Q-learning agent using PyTorch and simulated in V-REP environment
- Implemented server-synchronous API between Python and V-REP
- Automated data processing and visualisation with Excel VBA

PROJECTS & EXTRACURRICULAR

CreateBase *Auckland, NZ*
CO-FOUNDER & DESIGNER *Dec 2019 - Current*
- CreateBase is a startup that builds engaging STEM tools and contents for students
- Designing and implementing website front-end
- Collaborating with educational institutes to make active learning more accessible

Kessler *Auckland, NZ*
TETHER OPERATIONS CREWMEMBER *Aug 2018 - Current*
- Kessler is a student-run project that is launching a 1U CubeSat into space to verify the feasibility of electrodynamic tethers as a means of rapid deorbiting
- Wrote MATLAB code to calculate power budget based on GMAT orbital simulations
- Calculated accelerometer precision based on hardware specifications, atmospheric drag, and plasma density in low Earth orbit
- Created the Orbital Debris Mitigation Plan (ODMP) for the mission

United Nations Youth *Auckland, NZ*
COMMITTEE MEMBER & DELEGATE *Apr 2016 - Sep 2019*
- 2019 - Raise Your Voice Education Officer
- 2018 - Auckland Model UN Education Officer
- 2017 - Auckland Crisis Convention, Kaiarahi Facilitator
- 2016 - Aotearoa Youth Declaration, Botany Model UN, Howick Model UN Delegate

HONOURS & AWARDS

2019	**Sir Colin Maiden Scholar**, Dean's Leadership Programme
2019	**First in Course Award**, ENGSCI 314
2019	**Dean's Honour**, Faculty of Engineering
2018	**Dean's Honour**, Faculty of Engineering
2017	**Dean's Honour**, Faculty of Engineering

Botany Downs Secondary College
All Rounder of the Year 2014, 2015, 2016. **Captain of the Year** 2016. **Volunteer of the Year** 2015. **Statistics Scholarship** 2016.

LEADERSHIP

2019	**Project Leader**, ENGGEN 303
2018	**Education Officer,** Auckland Model United Nations
2018	**Project Leader**, ENGGEN 204
2017	**Class Representative**, EDUC 121G

Botany Downs Secondary College
Head Boy 2016. Prefect 2015. **Table Tennis Captain** 2014, 2015, 2016.

EDUCATION

- **University of Auckland** *Auckland, NZ*
  BE(HONS), 8.8 HONOURS GPA *2020*

- **College Board** *Auckland, NZ*
  1490 SAT SCORE, 770 MATHS I, 710 MATHS II, 690 PHYSICS *2017*