

Lemuel Lee

lemuellee.kl@gmail.com lemuellee.com github.com/lemuelkl linkedin.com/in/lemuelkl

EDUCATION

- M. Sc. in Environmental Data Science and Machine Learning Imperial College London 2025
- B. Eng. in Computer Science The University of Hong Kong 2024
 - Elective Focus: Big Data Analytics
 - Minor: Sustaining Cities, Cultures, and the Earth
 - Thesis: Deep Graph Representation Learning on Corss-border Electricity Trading
 - * supervised by Dr. Chao Huang
- Study Abroad in Computer Science Royal Holloway, University of London 2023
- A-level equiv. in ICT and Physics, top 10% in Hong Kong 2020

WORK EXPERIENCE

LOW CARBON CONTRACTS COMPANY LONDON

- Modeller Intern Summer 2023
 - Contributed to a PySpark Monte Carlo model for electricity market forecasting, supporting the company's role as a regulatory CfD counterparty
 - Applied stochastic processes in a cashflow risk engine to minimise Interim Levy Rate and Total Reserve Amount while adhering to risk thresholds
 - Designed Databricks AutoML infrastructure for interconnector and pumped storage modeling, with automated model selection and retraining
 - Conducted model specification and verification with internal and external stakeholders
 - Developed comprehensive documentation to fulfill public funding and audit requirements

SHATIN PUI YING COLLEGE HONG KONG

- Automation and Optimisation Developer Summer 2022
 - Architected, developed, and deployed a multi-user end-to-end e-ticketing solution
 - Developed a timetable scheduler with spatial-temporal and relational constraints
- Mathematics and Physics Programmer Summer 2022
 - Developed numerical tests for float precision, extreme/edge cases, and counterexamples
 - Prototyped a Haskell web service to convert HTML, Markdown, and KaTeX into Docx
- Mathematics and Physics Programmer Summer 2021
 - Contributed to a question bank using an in-house JavaScript-based functional domain-specific language for generating typesets, graphs, and 3D graphics
 - Featured on Sing Tao Daily, oldest and second-largest Chinese newspaper in Hong Kong

TEACHING EXPERIENCE

FACULTY OF ENGINEERING, THE UNIVERSITY OF HONG KONG

- Faculty Peer Mentor for first-year engineering students 2023–2024
- Staff-Student Consultative Committee student representative Fall 2023

DEPARTMENT OF COMPUTER SCIENCE, THE UNIVERSITY OF HONG KONG

Topics: Python, C/C++, data structures & algorithms, Unix, separate compilation

- Teaching Assistant for Computer Programming (COMP1117) Fall 2023
- Teaching Assistant for Computer Programming II (ENGG1340) Spring 2022
- Teaching Assistant for Computer Programming I (ENGG1330) Fall 2021

SCHOLARSHIPS

- HKU Worldwide Undergraduate Student Exchange Scholarships 2023
- South California Pui Ying Alumni Association Scholarship 2017 & 2019

COMPETITIONS

- Invitee in Hong Kong Counter-Strike 1.6 Retro LAN Showmatch TiG (ASUS sponsored) 2023
- Finalist vs Berkeley, Imperial, Yale, Stanford in Algo Crypto Trading Challenge Algogene 2023
- 2nd in Electronic Trading Challenge Jane Street Capital 2022
- HKU 6th InnoShow The University of Hong Kong 2022
- Code For Good J.P. Morgan 2022
- Hackathon Cathay Pacific 2021
- 2nd in Mini Robotic Car Competition City University of Hong Kong 2017

SOFTWARE PROJECTS

COURSEWORK

1. Corss-border electricity trading modelling with spatial-temporal graph NNs: GATs, STGCN, and Transformer
2. Python ODE solver by Taylor expansion and piecewise polynomial interpolation
3. Monte Carlo simlation of magnetic quasi-particle for stable energy configurations
4. Statistical image classifier with HOG, SVM, and PCA at global top 10%
5. Statistical time-series acoustic sensing of in-door human presence with autocorrelation and fourier analysis
6. Pacman AI with Bayesian Networks, Hidden Markov Models, and Particle Filters
7. External domain-specific language for 3D CAD with Backus–Naur form parser, elided Structural Operational Semantics rules, and interpreter in action semantics powered by JavaFX and Ambiguity Resolved Translators

OPEN-SOURCE

1. raft/raft.github.io Website for the Raft consensus algorithm 1374 stars
2. EnergieID/entsoe-py Python API client for the Transparency Platform of ENTSO-E 424 stars
3. d-mok/MathTree Web editor and JavaScript-based DSL for generating Maths and Physics MCQs

PERSONAL

1. lemuelllee.com Personal site in SvelteKit and TailwindCSS, scores 97 on Google Lighthouse 7 stars
2. 1189 Challenge Full stack Bible Reading Challenge PWA & SPA in Vue, Quasar, and Supabase 15 users
3. MC OMR Cross-platform C++ bubble sheet processing app in Qt and OpenCV 13 stars