

LI, KIN FUNG (CALVIN)

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EDUCATION

The Hong Kong University of Science and Technology (HKUST)

Sep 2019 - May 2024

Dual Degree Program: BEng(COMP & ELEC) & BBA(GBM); Minors in Math and Robotics

- CGA: 3.94/4.3 (top 3%)
- Activities: Academic Secretary (DDPOC 2020-21), Student Ambassador (IPOSA 2020-21)

Eidgenössische Technische Hochschule (ETH) Zürich

Feb 2022 - Aug 2022

Semester Exchange: Computer Science

- Grade: 5.63/6.0
- Member of *The Alternative*, a student society for technology, e.g. Linux, bash, console

RESEARCH INTERESTS

Matrix Phases, Phasal Analysis of MIMO Systems, Event-Triggered Estimation, Networked Control

RESEARCH EXPERIENCE

Matrix Phases

Jun 2023 - Present

Research Assistant to: Prof. Li Qiu

ECE@HKUST

- Studied the sectorial and segmental matrix phases, accretive-dissipative theory, numerical ranges and extensions
- Propose algorithms and criteria for the computation of segmental phases

Industrial Research: Link Adaptation in 5G URLLC

Jun 2023 - Present

Jointly supervised by Prof. Ling Shi and Dr. Yuchi Wu

ECE@HKUST

- Migrate multi-armed bandit (MAB) algorithms to link adaptation settings in 5G URLLC

Independent Study on Matrix Theory and Canonical Angles

Dec 2022 - Feb 2023

Research Assistant to Prof. Li Qiu

ECE@HKUST

- Authored the extensions to the textbook for "ELEC5600: Linear-System Theory" at HKUST
- Content: unitarily invariant norms, perturbation theory, canonical angles, Grassmann space and metrics

WORK EXPERIENCE

Flurry Finance

Jun 2021 - Feb 2022

Software Engineering Intern

- Implemented on-chain optimization of DeFi lending portfolio, up to 2x return of naive algorithm
- Programmed smart contracts and scripts for yield farming, staking, tokens, trading, price oracle

HIGHLIGHTED TECHNICAL SKILLS

Programming Languages

Java, Haskell, C, C++, Solidity, Python, JS, TS, MATLAB, etc.

Computer Science

OOP, FP, ML, DB, Algorithms, Formal Methods, Blockchain, Networking

Electronic Engineering

Control Theory, Signal Processing, Embedded Systems, Circuits

Economics & Finance

Econometrics, Portfolio Theory, Derivatives, DeFi

PROJECTS AND LEADERSHIP

T&M Prototyping: AI for Credit Rating Migration and Spread Prediction

Jun 2023 - Aug 2023

Student Developer (Team Leader and MVP)

- Prototyped an ML-based bond portfolio dashboard for credit rating and spread prediction
- Presented solution to a panel of director-level traders, portfolio managers and corporate bankers
- Data preprocessing of financial statements, ratings, bond data of OECD banks, and macroeconomic indicators
- Feature engineering and selection with time series; Stratified and walk-forward validation of models
- XGBoost for rating classification and migration; Autoregressive exogenous (ARX) model for spread prediction

T&M Corporate Consulting: Google and Open Data Strategy for HKT

Feb 2023 - May 2023

Student Consultant & Developer (Best performing team; Team Leader and MVP)

- Provided consultation to HKT Digital Out-of-Home (DOOH) business unit
- Presented solution to HKT executives, Google Cloud HK engineering team, and TalentLabs cofounders
- Deliverables: geospatial analysis, dashboard app, consultation report and presentation

Robocon Subteam, HKUST Robotics Team

Dec 2019 - Jun 2021

Team Leader & Hardware Engineer

- Multiple champions and awards in Robocon (2021: archery, 2020: rugby)
- Managed 30+ mechanical, hardware and software engineers, performed circuit design and electronics R&D

T&M Prototyping: Financial Investment Prototyping for UBS Zürich

Dec 2020 - Jan 2021

Student AI Developer (Team Leader)

- Prototyped a ML-based fintech startup prediction tool with 70% accurate funding patterns
- Data pipelining, hypothesis testing, K-means, PCA, decision tree, regression

AWARDS AND SCHOLARSHIPS

Cheung On Tak Charity Foundation Scholarship

Sep 2019 - May 2024

Fung Scholarship

Dec 2021 - Aug 2022

HKSAR Government Scholarship Fund - Talent Development Scholarship

Sep 2020 - Aug 2021

LANGUAGES

Native in Cantonese; Fluent in English and Mandarin.