

HSU, Ke-Cheng (Clio)
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EDUCATION

The Hong Kong University of Science and Technology

Master of Philosophy in Economics

Hong Kong

Sep 2020-present

Bachelor of Science in Mathematics and Economics and Minor in Actuarial Mathematics

Sep 2015 – Dec 2019

- Honor: Cumulative GA: 3.934/4.3
- Awards: Dean's List Award (2016-2019); University Scholarship (730K HKD); Academic Achievement Medal

RESEARCH INTEREST (Tentative)

- Industrial Organization/Game Theory/Mechanism Design

EXPERIENCE

Full Time Research Assistant

Taipei

(Game theory)

Jan 2020–Aug 2020

- Investigated the credibility for government to conduct bailout under certain interbank borrowing network
- Derived theoretical results in accordance with numerical simulation

Individual project

Hong Kong

(Time series analysis on macro-economics)

June 2019 – Nov 2020

- Adopted M-TAR and TV-ECM model to examine potential asymmetric wealth-consumption effect for both financial and housing wealth
- Used R to perform Monte Carlo simulation to test cointegration for non-standard distribution
- Examined asymmetric wealth-consumption effect for housing and Financial market in the United States

Individual Capstone Project

Hong Kong

(Financial Modeling)

Feb 2019 – June 2019

- Combined Markowitz mean-variance frontier theory and loss model to derive relationship between portfolio performance and risk attitude under market friction(no short sell and liability)
- Utilized Python to build model regarding risk preference on survival rate of portfolio under fixed and random liability
- Performed sensitivity analysis of optimal portfolio selection problem under liability constraint
- Studied relationship between Sharpe ratio and tail value at risk
- Derived liability constraint for portfolio selection and solve constraint optimization
- Compared performance between single period and multi-period discrete optimal portfolio theory by building Python class

Undergraduate Research Opportunity Program

Hong Kong

(Environmental Economics)

Sep 2018 – June 2019

- Performed data-mining using Python on four Indian government and company websites
- Processed and managed database using Stata SE
- Evaluated impacts of power outage on air pollution using high frequency data in India

Economic Research and Communication Program

Hong Kong

(Labor Economics)

Sep 2018 – Oct 2018

- Applied mathematical modeling in real problems by adopting fixed effect model to investigate salary discrimination by nationality in the NBA (National Basketball Association)
- Utilized Python to collect web-data, processed and managed data via Stata SE

HKUST & AECOM (Research and Industrial Project for students)

Hong Kong

(Statistical modeling)

Jun 2018 – Aug 2018

- Improved Hong Kong Air Ventilation Assessment guideline in coordinated with AECOM
- Worked in partnership with students from UCLA, Brown, MIT with diverse spectrum of disciplines from physics to computer science
- Used MATLAB and Python to run simulation of air ventilation and developed an unbiased and consistent statistical model for urban planning judgement
- Proposed three new methods for future industrial application

LEADERSHIP & EXTRA-CURRICULAR EXPERIENCE

HKUST Taiwanese Student Association

Hong Kong

General Manager

Oct 2015 – Oct 2016

- Held activities to bond Taiwanese students and to promote Taiwanese cultures within all universities
- Managed a group of 120 students. Responsible for arranging regular meetings, proposal drafting, liaison between school and association

SKILLS

- Languages: Mandarin (Native), English (Fluent), Cantonese (intermediate)
- Computer skills: C++/ python/ MATLAB/Stata SE/ Gretl / XL Miner/ MS Office(VBA)/R /latex