

KARL XIAO

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EDUCATION

Carnegie Mellon University, Mellon College of Science

Graduating May 2022

Degree B.S. in Computational Finance, Additional Major in Computer Science **GPA:** 3.84/4.00 *Pittsburgh, PA*
Coursework Calculus III, Linear Algebra, Differential Equations, Mathematical Finance, Probability
Imperative / Functional Programming, Microeconomics, Macroeconomics, Accounting

EXPERIENCE

Summer Undergraduate Research Program in Computational Finance

Jun 2019 | July 2019

Research Associate

Pittsburgh, PA

- Investigated using Python and C code the pricing of Forex options under various interest rate, volatility, and payoff assumptions within the Binomial and stationary Black-Scholes frameworks
- Performed simulations to show the convergence of early exercise boundaries in multi-period Binomial models to values predicted by the stationary Black-Scholes ODE for perpetual options
- Visualized simulation results of asset pricing using Matplotlib's scientific graphing functionalities

MoneyThink CMU

Jan 2019 –

Mentor Captain

Pittsburgh, PA

- Coordinate weekly 1-hour mentorships for 20+ High School Juniors and Seniors at various local high schools on financial management, investing, college, and standardized test preparation
- Head a 3-man team in delivering presentations and academic materials for each week's session

Technology Enhanced Facilities, Carnegie Mellon University

Sep 2018 | May 2019

TEF Operator

Pittsburgh, PA

- Performed Level 1 technical support to resolve software issues faced by users of Carnegie Mellon's Windows-, Mac- and Linux-based computing terminals for 8+ hours per week during term time

Munich Re Singapore Branch

Nov 2017 | May 2018

Intern, APAC1 Life Valuation

Singapore, Singapore

- Harnessed Excel's VBA Macros to optimize data consolidation from regional offices and determine key indicators such as fund solvency and Embedded Value that are required for statutory reporting
- Scrutinized and summarized in an Excel-based dashboard the features and performance of 40+ overseas reinsurance treaties, for incorporation by mid-2018 into Singaporean accounts

LEADERSHIP

Undergraduate Consulting Club, Carnegie Mellon University

Oct 2018 -

Pro-Bono Lead

Pittsburgh, PA

- Liaise with a multinational Healthcare startup for an ongoing project on Indian and U.S. market research
- Aided a Pittsburgh-based educational non-profit's sponsor acquisition efforts in 2018-19 by evaluating more than 100 potential partners and creating a long-term framework for sponsorship retention

Singapore Students Association, Carnegie Mellon University

Aug 2018 -

Treasurer

Pittsburgh, PA

- Allocate and oversee disbursement of a \$6,000+ annual budget to balance SSA's goals of organizing team-building events, celebrating local festivals, and promoting Singapore culture in large-scale school events
- Maintain the club's financial standing as Authorized Signer by signing off and verifying all its transactions

12th C4I Battalion, Singapore Armed Forces

Jan 2016 | Nov 2017

Command Post Signaler

Singapore, Singapore

- Transmitted intelligence updates over VHF radio networks during military exercises for National Service

HONORS

Putnam Competition 2019, *Results TBD*

Dec 2019

Quantathon 2019, *Honorable Mention (Top 7 of 53 teams), Carnegie Mellon University*

Feb 2019

Keith Block Entrepreneurship Competition, *1st Place, Carnegie Mellon University*

Nov 2018

SKILLS and INTERESTS

SOFTWARE and PROGRAMMING: Python, C, Linux, R, HTML/CSS, VBA, Microsoft Office

LANGUAGES PROFICIENCY: English (native), Mandarin (native), French (fluent), Spanish (basic)

EXTRACURRICULAR INTERESTS: Running, Backpacking, Symphonic Band (Saxophone), Watching Old Movies