

KARL XIAO

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5032 Forbes Avenue SMC 7023, Pittsburgh, PA 15289

EDUCATION

Carnegie Mellon University, School of Computer Science

Graduating May 2022

Degree B.S. in Computer Science, B.S. in Computational Finance

GPA: 3.84/4.00

Pittsburgh, PA

Coursework Imperative / Functional Programming, Algorithms, Computer Systems, Linear Algebra, Mathematical Finance, Calculus, Probability and Statistics, Economics, Accounting

EXPERIENCE

15-251 Great Theoretical Ideas in Computer Science, School of Computer Science

Jan 2020 –

Course Tutor

Singapore, Singapore

- Meet 1-on-1 with a tutee for two hours per week to review important ideas from class such as Turing Machines, Graph Theory, P vs NP, and Cryptography, and practice solving conceptual problems

Summer Undergraduate Research Program in Computational Finance

Jun 2019 | Jul 2019

Research Associate

Pittsburgh, PA

- Investigated under the guidance of Dr. William Hrusa the pricing of Forex options under various interest rate, volatility, and payoff assumptions within the Binomial and stationary Black-Scholes frameworks
- Performed Python and C 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 | Dec 2019

Mentor Captain

Pittsburgh, PA

- Provided weekly 1-hour mentorships for 20+ High School Juniors and Seniors at various local high schools on personal finance topics such as savings, credit cards, loans, taxes, and college preparation
- Headed a 3-man team in coordinating with school authorities and delivering presentations at each session

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 that were slated 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

- Construct and disburse a \$6,000+ annual budget that allows the SSA to continually organize events that foster team building, celebrate local festivals, and promote Singapore culture in large-scale campus events
- Maintain the club's good financial standing by approving and verifying all expenditures as Authorized Signer

HONORS

Putnam Competition 2019, *Top 600 / 3500 Participants*

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/JavaScript, Standard ML, Java, VBA

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

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