KARL XIAO

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EDUCATION

Carnegie Mellon University   **Expected May 2022**
B.S. in Computer Science, B.S. in Computational Finance   *Pittsburgh, PA*
- **GPA:** 3.87/4.00, **SAT**: 2390/2400
- **Coursework:** Distributed Systems, Functional Programming, Machine Learning, Stochastic Calculus, Economics

WORK EXPERIENCE

SEA Group   **Jun 2020 | Aug 2020**
Software Engineer Intern   *Singapore, Singapore*
- Implemented UI/UX components in ReactJS for a comprehensive Human Resources module that augments the company's Seatalk app by allowing attendance, leave, and claim issues to be locally reported and centrally managed
- Built email templates using HTML/CSS from scratch, contribute multi-language support, and send HTTP requests to deliver them to companies during the onboard process after they sign up for the HR platform
- Added customizable elements in Typescript to proprietary UI component library for front-end development use

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 long-maturity Forex options under various interest rate, volatility, and intrinsic value assumptions under the Binomial and stationary Black-Scholes models
- Performed Python and C simulations to show the convergence of optimal early-exercise boundaries in multi-period discrete models to values predicted by the stationary Black-Scholes ODE as maturity approaches infinity
- Visualized asset pricing as a function of time and underlying stock price using Matplotlib's graphing functionalities

Singapore Students Association, Carnegie Mellon University   **Feb 2019 | Feb 2020**
Treasurer   *Pittsburgh, PA*
- Constructed and monitored a $6,000+ annual budget that allowed the SSA to organize team-building sports activities, celebrate local festivals, and promote Singapore culture while maintaining its good financial standing
- Led the planning and execution of large-scale campus events such as Chinese New Year and Mid-Autumn Festival

MoneyThink CMU   **Jan 2019 | Dec 2019**
Mentor Captain   *Pittsburgh, PA*
- Provided weekly 1-hour mentorships for 30+ High School Juniors and Seniors from various Pittsburgh-area public schools on personal finance topics such as savings, credit cards, taxes, insurance, and college preparation
- Headed a 3-person team in coordinating with school authorities and creating lesson material for each session

PERSONAL PROJECTS

Personal Website   **Dec 2019 -**
Languages & Frameworks: HTML, CSS, JavaScript, Bootstrap CSS, ReactJS   *Pittsburgh, PA*
- Document academic, project and extracurricular involvements on a website built from scratch using basic UI tools

Stock Market Tracking   **Summer 2018**
Languages & Frameworks: Get and Transform (Excel), Power Query M, VBA, Google API   *Singapore, Singapore*
- Created an Excel spreadsheet that linked to live and time-series data on Google Sheets and Google Finance
- Used Get and Transform as well as VBA macros to format and convert data into graphics for technical analysis

HONORS

Putnam Competition: Top 600/3500 Participants   **Dec 2019**
CMU Quantathon: Honorable Mention (7/53 teams)   **Feb 2019**
Keith Block Entrepreneurship Competition: 1st Place   **Nov 2018**

SKILLS and INTERESTS

Technical Skills: C, C++, JavaScript, HTML/CSS, Go, Python, R, Linux, Standard ML, Java, Bash, VBA
Languages: English (native), Mandarin (native), French (fluent), Spanish (basic)
Other interests: Running, Solo Travelling, Piano, Saxophone, Old Movies