

KATHERINE YANG

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EDUCATION

Carnegie Mellon University | GPA: 3.48/4.00

Bachelor of Science in Mathematical Sciences

May 2021

Concentration in Operations Research and Statistics

Double minor in Computer Science and Computational Finance

Dean's List: Spring 2018 (Honors), 2019 (High Honors)

Relevant coursework: Mathematical Finance, Discrete Time Finance, Continuous Time Finance, Probability Theory, Statistical Inference, Modern Regression, Fundamentals of Programming, Principles of Imperative Computation, Principles of Functional Programming, Parallel and Sequential Data Structures and Algorithms, Theoretical Ideas of Computer Science

WORK EXPERIENCE

Computational Finance Summer Undergraduate Research

Summer 2019

Carnegie Mellon University

- Collaborated with Principal Financial to research index replication in fixed income markets by using advanced statistical methods to dynamically select a small number of bonds so as to mimic the behavior of a Fixed Income index. We employed stratified sampling and clustering methods to define groups, and then used linear programming to mimic the behavior of the chosen index while also minimizing portfolio turnover.

Teaching Assistant

Fall 2018, Fall 2019-present

Fundamentals of Programming and Computer Science (15112)

- Closely mentor 30 students in a Python programming course covering basic techniques, data structures, debugging, and applications
- Lead weekly recitations, course-wide review sessions, and one-on-one tutoring sessions

LEADERSHIP & ACTIVITIES

15-112 Head Teaching Assistant

Fall 2020, Summer 2019

Worked closely with professors to make course-wide decisions; managed a staff of TAs and organized all course-related events, including training, recitations, and grading

15-112 Division Leader

Spring 2020

Oversaw all course content creation, including writing recitation plans, practice exams, and review materials

Goldman Sachs Engineering Essentials Program

Summer 2019

One of 73 people selected to participate in the Engineering Essentials Program

SKILLS & INTERESTS

Programming

Python, R, SML, C, Java, React, HTML, Pandas

Software & Tools

Unix, MS Office, Latex, JMP, Github (<https://github.com/kyang21>)

Language

English (native), Mandarin (conversational)

Interests

Drawing, Rock Climbing, Track & Field, Music