

Austin Yao

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EDUCATION

University of Pennsylvania

August 2021 - May 2025

- B.S.E/M.S in Computer Science | Minor in Mathematics | GPA: 3.92 / 4.00 *Philadelphia, PA*
- **Relevant Coursework:** Advanced Algorithms, Operating Systems, Distributed Systems, Randomized Algorithms, Stochastic Processes, Probability, Algorithmic Game Theory, Discrete Mathematics, Corporate Finance

SKILLS

Languages Python, Java, C/C++, Javascript, Solidity, Go
Development Node.js, AWS, Spark, Express, React, Spring Boot, HMTL & CSS

EXPERIENCE

Morgan Stanley

June 2023 - August 2023

Technology Intern

New York, NY

- Created a centralized logging system between cloud and virtual machine instances using Java and Spring Boot.
- Developed a data dashboard used by Operations Technology department for internal service availability with feature flags using Java and Swagger.

University of Pennsylvania CS Department

January 2022 - Present

Head Teaching Assistant

Philadelphia, PA

- Oversee a staff of 40 TAs, create exams and problem sets, and manage course logistics for 220 students.
- Instruct 15+ students in weekly recitation on divide and conquer, graph algorithms, data structures, and randomization.

Investnet

June 2022 - August 2022

Software Engineer Intern

Raleigh, NC

- Engineered a back-end micro-deposit platform for bank account verification using Node.js and Express.

PROJECTS

FaceBook

November 2022 - December 2022

JavaScript, Express, HTML, Bootstrap, Spark, AWS DynamoDB, AWS EC2

- Developed a basic version of FaceBook with functionality such as account creation, following and unfollowing friends, commenting and liking posts.
- Built JavaScript visualizer for users to see their network of mutual friends based on professional affiliation.

Ethereum Merkle Trie Research

February 2023 - May 2023

Golang, Python, File I/O, Matplotlib

- Programmed the ability for Ethereum to track the byte size of internal Merkle Trie nodes that get modified in each transaction and performed data analysis.
- Authored paper for Scroll, a Sequoia Capital backed start-up developing a zero-knowledge Ethereum virtual machine.

UContext OS

November 2023 - December 2023

C, Threads, Scheduling

- Programmed a round-robin scheduler to run ucontext library threads on a priority basis, as well as handle interrupts from keyboard input.
- Developed a shell interface for the user to run built-in commands and have job control such as signaling and elevating different threads.

Shapley Value Research

November 2023 - Present

Cooperative Game Theory

- Designing an incentive protocol to encourage collaboration between developers on a decentralized application by allocating payouts using Shapley values and player ratings.

ACTIVITIES

Penn Blockchain

August 2022 - Present

- Sourced \$20,000 from various organizations by proposing research grants for Penn's premier decentralized technology club.