

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: 3.93 / 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 C/C++, Python, Java, 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 30-person 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.

Envestnet

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

UContext OS

November 2023 - December 2023

C, Threads, Scheduling

- Programmed a round-robin scheduler to run ucontext library threads with priority, as well as handle keyboard interrupts.
- Developed a shell interface for the user to run built-in commands and signal or elevate different threads.

BigTable

April 2024 - May 2024

C++

- Programmed a multithreaded, distributed database modeled on Google's BigTable, allowing users to upload, modify, and download data across multiple servers.
- Implemented distributed commit using the 2PC algorithm, a server load balancer, and fault tolerance using snapshotting and logging.

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.

Shapley Value Research

November 2023 - January 2023

Cooperative Game Theory

- Designed an incentive protocol to encourage collaboration between developers by allocating payouts using Shapley values.