

# Randy Zhou

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## EDUCATION

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**Cornell University**, College of Arts and Sciences, Ithaca, NY  
Bachelor of Arts, Computer Science (Major); CAPS, East Asian Studies (Minors)  
Magna Cum Laude; GPA: 3.94; 6x Dean's List

**May 2021**

**Relevant University Coursework:** Object-Oriented Programming, Data Structures, Functional Programming, Systems Programming, Operating Systems, Computer Architecture, Computer Networks, Analysis of Algorithms, Distributed Computing, Resilient Computer Systems, Database Systems, System Security

## PROFESSIONAL EXPERIENCE

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### Software Development Engineer Intern at Amazon (Seattle, WA)

**Summer 2021**

- Designed and implemented a "Session Journey Mapper" for in-depth exploration of customer behavior during Kindle reading sessions across hundreds of indexed datasets and petabytes of data using AWS technologies such as S3, Lambda, DynamoDB and Athena.
- Architected data indexing strategies, back-end API design, web UI (React) and access control mechanisms, and helped onboard new hires for longer-term support of the project.
- Expedited a week-long process to aggregate data on the customer level, enabling analytics, debugging and customer service teams to deep-dive into user behavior within seconds.

### Software Development Engineer Intern at Amazon (Seattle, WA)

**Summer 2020**

- SDE intern under the devices organization (Kindle), where I implemented and deployed a reusable and configurable data transformation service for company-wide compliance with data privacy legislation using AWS technologies such as Lambda, Cloudformation and S3.
- Reduced transformation onboarding time to a matter of minutes by providing prebuilt and flexible support for arbitrary transformation of text fields, standardization of timestamp formats and ID mapping.

### Software Engineer Intern at Savvas (Boston, MA)

**Summer 2019**

- Worked with Savvas software engineers to decide new coding standards in new Angular and Express.js projects for an edtech platform, Savvas Realize, with over 5.5 million annual users.
- Reduced micro-frontend, backend-for-frontend and microservice project setup time from several days to a matter of minutes by automating initial project scaffolding and adding seamless integration of commonly used libraries.

## ACADEMIC EXPERIENCE

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### CS 5414 (Distributed Computing Principles) Teaching Assistant

**August 2020 - December 2020**

- Teaching assistant for CS5414, a graduate level distributed systems course at Cornell. Taught and graded material on classic distributed programming concepts such as consensus (Paxos), atomic commit and consistency.

### Research Assistant at Systems Architecture and Infrastructure Lab

**August 2019 - May 2021**

- Evaluated benchmark/application performance on heterogeneous datacenter architectures (processing-in-memory) by identifying memory hotspots using tools such as the Intel VTune Profiler and ZSim
- Investigated + profiled the effects of garbage collection interference on cloud microservice performance
- Extended an FPGA-accelerated RPC offload platform to implement at-least once message delivery in hardware

### CS 3410 (Computer System Organization and Programming) Teaching Assistant

**January 2019 - May 2021**

- Held weekly office hours, graded exams/projects, answered student questions on Piazza, and co-lead a weekly lab section for a core-curriculum computer systems programming course at Cornell.
- Run and maintain course infrastructure by deploying grading scripts and dependencies, setting up per-assignment staff server configurations, etc. Develop autograder scripts, staff solutions as well as original course material.

## SPECIALIZED SKILLS

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**Programming Languages/Technologies:** Python, Java, Kotlin, C, Assembly (RISCV/MIPS/x86), Verilog, JavaScript, TypeScript, SQL (MySQL, PostgreSQL), NoSQL, React, OCaml, C#, Node.js, Angular, HTML/CSS, Haskell, Express.js, Full-Stack, Front-End, Back-End, Android App Dev, AWS, Git, Linux, REST APIs

**Foreign Languages:** Chinese (advanced)