

Carl Guo

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Education

University of Illinois at Urbana-Champaign

Masters of Science in Computer Science

Graduation Date: May 2023, GPA: 3.5/4.0

Bachelor of Science in Computer Science

Graduation Date: May 2021, GPA: 3.73/4.0

Minor in East Asian Languages and Culture (EALC)

Coursework

† *Algorithms & Models of Computation* † *Numerical Analysis* † *The Art of Web Programming* † *Intro to Data Mining*
† *Communication Networks* † *Intro to Deep Learning* † *User Interface Design* † *Advanced Computer Security* † *Topics in Internet of Things* † *Security and Privacy of Home IoT*

Work Experience

Amazon

Software Development Engineer Intern

May 2021 - August 2021 — Seattle, WA

- Built new authorization library in Java, now adopted by hundreds of internal Amazon services.
- Contributed in designing and optimizing library features, wrote design documents and client facing documentation.
- Wrote unit and integration tests, integrated library with an existing service, and presented a working demo to team and upper management.

Software Development Engineer Intern (Remote)

June 2020 - August 2020 — Champaign, IL

- Designed, developed, and tested a new Java service to allow Amazon teams to set rate limit and data access policies for their services.
- Created functional end to end service using two AWS technologies: ElastiCache Redis and AppConfig.
- Wrote enterprise code and unit tests, participated in code reviews, and used frameworks such as Guice and Mockito.

University of Illinois

Graduate Research Assistant

January 2022 - May 2022 — Champaign, IL

- Worked with Prof. Ranjitha Kumar in research group exploring types of content beyond PII (personally identifiable information) that users find sensitive in mobile UI.
- Helped build infrastructure in React to record users' mobile app interactions as traces and allow users to redact UI regions they deem sensitive.
- Ran user studies where participants recorded their interaction on chosen apps and redacted sensitive screen regions.
- Participated in paper writing and submitted to UIST, a top HCI conference.

Graduate Teaching Assistant

August 2021 - December 2021 — Champaign, IL

- Teaching assistant for course "Art of Web Programming" teaching full stack web development.
- Held weekly office hours, graded assignments, and answered student questions on piazza, a public class forum.
- Created and gave lecture presentations to help students get started with assignments.

Undergraduate Course Assistant

August 2019 - December 2019 — Champaign, IL

- Course assistant for "Software Design Studio", teaching freshman good Java and C++ coding practices.
- Moderated code reviews for students, held weekly office hours to assist students, and graded assignments.

Projects

Course Registration App

Dec 2021

- Built functional prototype of novel UIUC course registration mobile app for user interface design course project.
- Created app using React Native frontend and Google Firebase backend with real UIUC courses as mock data.
- Gained experience with iterative design, creating survey studies, and conducting usability tests.

TODO Application

May 2021

- Developed a to-do list web application with MERN stack (MongoDB, Express, React, Node.js.)
- Can create new events with priority and completion status and also filter events by these criteria.

Skills

Programming Languages

Java, C++, C, C#, JavaScript, Python, SQL, Excel VBA

Web Development

React, React Native, Node.js, MongoDB, HTML, CSS/SCSS, ASP.Net MVC

Software Tools

Git, Node, numpy, scipy, pandas, TensorFlow, PyTorch, Google Firebase, Guice, JUnit, Valgrind, GDB