

# Harrison Zhu

Atlanta, GA

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## Education

### Georgia Institute of Technology

August 2019 - May 2023

CANDIDATE: B.S. IN COMPUTER SCIENCE

Atlanta, GA

- Relevant Coursework: Design of Algorithms, Data Structures and Algorithms, Database Systems, Machine Learning, Objects and Design, Object-Oriented Programming
- **GPA: 4.0**; Faculty Honors for 5 semesters.

## Skills

<b>Programming Languages</b>	Java (proficient), Python (proficient), JavaScript(Node.js) (intermediate), CSS (intermediate), HTML (intermediate), C# (intermediate), SQL/MySQL (intermediate)
<b>Technologies</b>	Git (proficient), L <sup>A</sup> T <sub>E</sub> X (proficient), fastai/PyTorch (intermediate), Jupyter Notebooks (intermediate), React (intermediate), Azure (basic)

## Work Experience

### Microsoft

May - August 2021

SOFTWARE ENGINEERING INTERN

Atlanta, GA

- Implemented a compute and networking diagnostics tool for new servers being integrated into the Azure Dedicated ecosystem.
- Designed and implemented a system to track and log information during cloud resource allocation using back-end services such as Azure Service Bus, Azure Functions, and Kusto Databases.
- Aggregated and coordinated data sources from multiple teams across Azure Dedicated into a unified metrics UI.
- Contributed maintainable, reusable code that consistently and reliably passed unit tests and code reviews from senior engineers.
- Established tooling for engineers that significantly reduced the time to mitigate issues and supplemented that tooling with documentation that was praised by principal engineers and architects.

### Georgia Institute of Technology

May 2020 - Present

UNDERGRADUATE TEACHING ASSISTANT: CS 1332 (DATA STRUCTURES AND ALGORITHMS)

Atlanta, GA

- Collaborated with a large team of 30 co-teaching assistants to ensure student success, grade assignments, and create recitation guides for the instruction of 600 students.
- Coordinated bi-weekly office hours and answered questions concerning course content, projects, and exams.
- Held weekly recitation sessions and managed student questions during lectures.

## Projects

### Data Structures and Algorithms Visualization Tool

September 2020

- Fixed algorithm definitions in the open-source CS 1332 visualization tool web application used by 600+ students to visualize data structures and algorithms.
- Programmed visualization using JavaScript, React, and the University of San Francisco animation API.
- Implemented feature requests that increased the tool's effectiveness in helping students visualize data structures and algorithms as well as in helping instructors teach concepts.

### Squiggle

October 2020

- Implemented a front-end interface for a restaurant load-balancing web application during HackGT7.
- Employed React, JavaScript, and CSS to create and style reusable React components for use in constructing the interface.

### String Instrument Image Classification

July 2020

- Designed an image recognition machine learning model that distinguishes between instrument images (of violins and cellos) using the fastai library on top of PyTorch.
- Adapted, tuned, and exported the ResNet-34 convolutional neural network for use in transfer learning between the ImageNet dataset and the custom instrument dataset.
- Deployed the model as a web app using Render and by adapting existing HTML, CSS, and JavaScript code.

## Honors & Awards

- 2020 **CS2340 Top Scorer**, Scored the highest out of 104 students in **CS2340** (Objects and Design)
- 2019 **Finalist**, National Merit Scholar - Southern Company Scholarship