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

Programming Languages	Java (proficient), Python (proficient), JavaScript (intermediate), CSS (intermediate), HTML (intermediate), C# (intermediate), SQL/MySQL (intermediate)
Technologies	Git (proficient), LaTeX (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 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