Harrison Zhu

Atlanta, GA

(317) 919-9018 | hzhu359@gatech.edu | hzhu359.github.io | hzhu359 | hzhu359

Education

Georgia Institute of Technology *August 2019 - May 2023*

CANDIDATE: B.S. IN COMPUTER SCIENCE *Atlanta, GA*

- Relevant Coursework: Data Structures and Algorithms, Machine Learning, Intro to AI, Objects and Design, Object-Oriented Programming
- **GPA: 4.0**; Faculty Honors for 2 semesters.

Skills

Programming Languages	Java (proficient), Python (proficient), CSS (intermediate), HTML (intermediate), JavaScript (basic)
Technologies	Git (intermediate), LaTeX (intermediate), fastai/PyTorch (intermediate), Jupyter Notebooks (intermediate)

Experience

Ultimate Software *May - August 2020*

SOFTWARE ENGINEERING INTERN *Atlanta, GA*

- Internship offer accepted, but deferred due to the COVID-19 pandemic.

Georgia Institute of Technology *May 2020 - Present*

UNDERGRADUATE TEACHING ASSISTANT: CS 1332 (DATA STRUCTURES AND ALGORITHMS) *Atlanta, GA*

- Collaborated with a large team of 29 teaching assistants and 2 professors to ensure success, grade assignments, and create teaching guides for the instruction of 600 students.
- Coordinated bi-weekly office hours and answered questions concerning course content, projects, and exams.
- Managed weekly recitation sessions and lectures and answered student questions.

Projects

Data Structures and Algorithms Visualization Tool *September 2020*

- Fixed faulty algorithm definitions in the open-source CS 1332 visualization tool used by 600+ students to visualize data structures and algorithms.
- Implemented fundamental visualization using JavaScript, React, and the University of San Francisco animation API.
- Improved a codebase that is known to be especially effective in enabling students to study concepts and assisting teaching assistants and professors to teach concepts.

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.
- Built model as an illustrative introduction to deep neural nets, dataset construction, and web deployment.

Cover Type Prediction *October 2019*

- Analyzed and predicted the type of tree in a forest given a list of over 50 attributes using the scikit-learn, pandas, and numpy libraries.
- Visualized and discovered patterns and clusters within the dataset using the Seaborn library.
- Adapted a Random Forest model in order to classify cover types in forests.

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