Harrison Zhu

Atlanta, GA

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Education

Georgia Institute of Technology *Atlanta, GA*

Candidate: B.S. in Computer Science *August 2019 - (Expected) May 2023*

- Relevant Coursework: Machine Learning (in progress), Computer Organization & Programming (in progress), Intro to AI, Objects and Design, Data Structures and Algorithms, Intro to Object-Oriented Programming, Discrete Math, Linear Algebra
- **GPA: 4.0**

Skills

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

Experience

Ultimate Software *Atlanta, GA*

Software Engineering Intern *May 2020 - August 2020*

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

Georgia Institute of Technology *Atlanta, GA*

Undergraduate Teaching Assistant: CS 1332 (Data Structures and Algorithms) *May 2020 - Present*

- Ensured success, graded assignments, and generally assisted the instruction of ∼600 students in collaboration with a large team of 29 teaching assistants and 2 professors.
- Coordinated bi-weekly office hours and answered questions concerning course content, projects, and exams.
- Managed weekly recitation sessions and lectures and answered student questions.
- Collaborated w/ teaching assistant staff to create shared recitation, homework grading, and assignment guides.

Projects

String Instrument Image Classification *July 2020*

- Used the fastai library on top of PyTorch to program and design a machine learning model that distinguished between instrument images (specifically between violins and cellos).
- Adapted, tuned, and exported the ResNet-34 convolutional neural network for use in transfer learning between the ImageNet dataset and the custom instrument dataset.
- Modified HTML, CSS, and JavaScript code in order to deploy the image classification model as a web app using Render.
- Built model as an illustrative introduction to deep neural nets, dataset construction, and web deployment.

Cover Type Prediction *October 2019*

- Used the scikit-learn, pandas, and numpy libraries to predict and analyze the type of tree in a forest given a list of over 50 attributes.
- 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.

Georgia Tech Ping-Pong Website *October 2019*

- Contributed to a website that tracked when ping-pong tables were in use around the Georgia Tech campus.
- Formatted the website using the W3.CSS framework.
- Created JavaScript functions to change color of table elements using onclick events.
- Completed a front-end implementation of a website that tracked an array of Ping-Pong table locations.

Honors & Awards

2020	**CS2340 Top Scorer**, Scored the highest out of 104 students in **CS2340** (Objects and Design)	*Atlanta, GA*
2019	**Finalist**, National Merit Scholar - Southern Company Scholarship	*Atlanta, GA*
2018	**Finalist**, Georgia Governor's Honors Program	*Rome, GA*