William Y. **Yao**

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Education

Harvard University   *Cambridge, MA*
A.B. IN APPLIED MATHEMATICS AND COMPUTER SCIENCE   *May 2021*
- **Selected Coursework:** Statistical Inference | Data Structures and Algorithms | Systems Programming and Machine Organization | Linear Algebra, Real Analysis and Multivariable Calculus | Decision Theory | Abstract Algebra | Probability | Law, Science, and Society
- **Publications:** *Toward Instrumenting Makerspaces: Using Motion Sensors to Capture Students' Affective States in Open-Ended Learning Environments* (coauthored) in Proceedings of The 12th International Conference on Educational Data Mining

The Juilliard School, Precollege Division   *New York, NY*
DIPLOMA IN VIOLIN PERFORMANCE   *May 2017*
- Studied solo, chamber and orchestral violin performance under the tutelage of Dr. Ann Setzer and Mr. Khullip Jeung

Experience

Ab Initio Software Corporation   *Lexington, MA*
SOFTWARE ENGINEER INTERN   *Jun. 2019 - Aug. 2019*
- Built production-critical, interactive home page dashboard for a large scale monitoring application, with **React**, **Typescript** and **Java**.
- Designed and implemented reusable, browser-agnostic page layout algorithm. Wrote unit tests to verify performance and functionality.
- Collaborated with UX experts for designing new features to effectively provide high level information summaries on the dashboard.

The Harvard Crimson | thecrimson.com   *Cambridge, MA*
DIRECTOR OF TECHNICAL DEVELOPMENT | SOFTWARE ENGINEER   *Dec. 2017 - Present*
- Teach weekly lectures on **React**, **GraphQL**, **Python**, **JavaScript**, **HTML/CSS**, and web development to train incoming engineers.
- Hold office hours to assist trainees on The Crimson codebase and other relevant technologies.

Harvard Graduate School of Education   *Cambridge, MA*
TEACHING FELLOW (EDU S435: COMPUTATIONAL METHODS IN EDUCATIONAL RESEARCH)   *Jan. 2019 - May 2019*
- Co-teach weekly lectures with the Professor and hold office hours to assist students with course content and assignments for graduate course in computer programming techniques in educational research.
- Grade student work, give feedback on weekly problem sets, and answer questions on online question forum.

Loro | loro.xyz   *Cambridge, MA*
SOFTWARE ENGINEERING INTERN   *Jun. 2018 - Jan. 2019*
- Develop software to operate and support a portable, wheelchair-attachable device that serves as a personal assistant for ALS patients. Features include 360 camera, speech-to-text and text-to-speech capability, facial recognition and detection, and eye-gaze control. Built using **Electron** framework with **Node.js**, **HTML/CSS**, and **jQuery**.
- Winner of Prize4Life Assistive Technology Hackathon.

Learning, Innovation, and Technology Lab | Harvard Graduate School of Education   *Cambridge, MA*
RESEARCH ASSISTANT   *Jun. 2018 - Present*
- Write software to generate data visualizations of Kinect data and OpenFace data for a makerspace experiment in the Learning, Innovation, and Technology Lab using Python.
- Design and implement algorithms to generate a person's line of sight to measure collaboration during group work.

Computer Science 50 | Harvard University   *Cambridge, MA*
COURSE ASSISTANT   *Aug. 2018 - Jan. 2019*
- Hold office hours to assist students with course content and assignments for Harvard's largest computer science class.

Harvard University Department of Computer Science   *Cambridge, MA*
PEER CONCENTRATION ADVISOR   *Jan. 2019 - Present*
- Serve as an student advising resource for current and prospective computer science majors at Harvard, tasked with giving advice on course selection, internship/job recruiting and study abroad programs.

National Youth Orchestra of the United States of America   *New York, NY*
VIOLINIST   *Summer 2015, 2016, 2017*
- Performed in Carnegie Hall and embarked on concert tours of Asia, Europe, and Latin America, fully funded by Carnegie Hall.
- Served as cultural ambassador through cultural exchange initiatives with local youth.

Skills

Technical   Python, R, C, C++, Java, Typescript, JavaScript, React, SQL, HTML/CSS, LaTeX, Solidworks
Languages   English, Mandarin Chinese