

Zhicheng Huang

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<https://huangworld.github.io/>

I am interested in exploring and applying sub-fields of Computer Science, including Programming Language, Human-Computer Interaction, and Software Engineering to improve equity in the world.

Education

2019–Present **Bachelor of Science**, *University of Michigan*, Ann Arbor, GPA: 3.89/4.00
Double Major in Computer Science and Cognitive Science (Decision and Cognition track)

Publication

2022 **WebRobot: Web Robotic Process Automation using Interactive Programming-by-Demonstration.**
Rui Dong, Zhicheng Huang, Ian long Lam, Yan Chen, Xinyu Wang Proceedings of the ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI), 2022.

Research Experience

2022–Present **Mixed-Initiative Web Automation for Better User Control and Confidence.**
Research Assistant, Advised by Xinyu Wang and Tianyi Zhang.

- Devised a normalizer to disambiguate DOM elements in user demonstrations.
- Added front end support for modifying previous demonstrations.
- Incorporated bulk scraping functionality to the front end, making visualizations of the generated program 3 times faster on lengthy websites.

2021–2022 **Interactive Web Robotic Process Automation.**
Research Assistant, Advised by Xinyu Wang.

- Designed a Chrome Extension interface to record user demonstrations of scraping tasks.
- Visualized generated scraping programs for users to disambiguate.
- Defined the communication protocol between the front end and back end modules.

Teaching Experience

Fall 2022 **Instructional Aide for EECS 481 (Software Engineering).**
Led discussion, held office hours, graded homework, and wrote exam questions.

Work Experience

2022–Present **Yerbba**, Ann Arbor, MI

Software Engineer Intern.

- Developed an internal tool to display relevant code segment and documents in JavaScript to speeds up a manual review process by 400%.
- Built a regression testing pipeline through Python Selenium and Chrome Webdriver.
- Established a utility desktop App via JavaScript and Electron to simplify frequent manipulating of Meteor App and database in order to efficiency for employees with little programming background.
- Maintained Meteor methods and MongoDB database to ensure the generation of medical reports to users.

Selected Projects

Search Us

Wrote a fully functional multi-threading Internet search engine. [Link](#).

RateMProfessors

Constructed a tool to simplify the process of looking up professors' Rate My Professors page on UM's LSA Course Guide. [Link](#).

Image Colorization

Implemented a neural network to colorize greyscale images in Python. [Link](#).

DJ183

Built a web-based "Guess-the-Song" game in Python(flask), HTML, SQLite, and CSS.

Honors and Awards

James B. Angell Scholar, 2021

University Honors, 2019, 2020, 2021, 2022

William J. Branstrom Freshman Prize, 2020

Skills

Languages: Mandarin (Native), English (Proficient)

Programming: C++, Python, JavaScript