Shihan Ai

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Experience

Yaar Inc. Senior Software Engineer
February 2018 - September 2020, Toronto CA

- Invented a novel JavaScript web automation framework that understands dynamic HTML DOMs and simulates actions such as clicking and typing. This framework enables Yaar to perform web tasks (scheduling meetings, replying to emails, etc) for the user and save the user around 1 to 30 minutes per task.
- Redesigned the task automation process and reduced the computation time of task automation by an average of 82%.
- Developed an internal testing environment using React, JavaScript and Electron which provided tools to debug and monitor the performance of machine learning models on various web tasks. The environment was used by the Machine Learning team (3 people) for 90% of their work hours and played a crucial role in the development of Yaar.
- Created a tool using JavaScript to collect voice samples from over 50,000 workers on Amazon Mechanical Turk. The voice samples were used to train a keyword detection model which achieved an accuracy of 93%.
- Directed project management (Asana, Jira) and design meetings, and demonstrated product iterations which received continuous positive feedback from investors.
- Facilitated infrastructure and security design meetings and implemented user privacy and security policies (TLS, JWTs, Magic links, Expo Secure Store) to satisfy investor requirements.
- Filed 3 patents and led meetings with patent lawyers to communicate sensitive implementation details in an organized and concise manner.

IBM Software Engineer Intern
May 2015 - September 2016, Markham CA

- Spearheaded management to allocate $150,000 into fixing the IBM DB2 installer by developing a PMR (Problem Management Report) analytics platform using React and Node, and identifying that 78% of all PMRs were installer related.
- Automated the promotion of IBM DB2 on Twitter and saved 6 hours of manual work every day by developing a Twitter bot using Node, JavaScript, and the Twitter API.

Projects

Photo Foreground Extraction | csaishih.github.io/projects/foregroundextraction
Created a tool using Python, NumPy and OpenCV that can classify pixels in a photo as the subject of the photo and improved the processing time of 12-Megapixel images from 74 seconds to 3.6 seconds when benchmarked against the GrabCut algorithm.

Selfie Acne Remover | csaishih.github.io/projects/inpainting
Researched and developed a tool using Python, NumPy, and OpenCV that can remove acne from selfies by cropping out user defined areas in a photo and replacing the cropped out areas with visually plausible textures.

Skills

Proficient: Python, JavaScript, HTML/CSS, React, React-Native, Redux, Node.js, Electron, Expo, SQL, Git
Working Proficiency: Java, Golang, Swift, Objective-C, C++, C, Docker, AWS
Soft Skills: Project Management, Communication, Public Speaking, Writing

Education

University of Toronto Honours Bachelors of Science in Computer Science
September 2012 - June 2017, Toronto CA
Major GPA: 3.58/4.00; CGPA: 3.40/4.00