

Ashley Chang

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in [/ashley-e-chang](#)

🌐 [/spswatron](#)

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🎓 Education

Brown University

BS Computer Science

BA Literary Arts

August 2019 – May 2023

Providence, RI

GPA 4.0/4.0

🔧 Experiences

NASA Chandra X-Ray Observatory

Research Assistant

January 2021 – Present

Providence, RI

- Developed a client-side [image sonification platform](#) using React, OpenCV, and Tone.js
- Developed a generalized image sonification algorithm that involved pitch, tone, instrument, rgb values, edge detection, and object identification
- Implemented the algorithm on hundreds of images from the NASA Chandra Space Observatory

Corteva Agriscience

Software Development Intern

May 2021 – August 2021

Indianapolis, IN

- Built and tested an inoculum request and production app using Outsystems, Javascript, and SQL
- Developed the app's request submission, messaging/feedback, and role assignment features
- Created a data collection and display site for the Corteva GROW science outreach program

Watson Institute for Public Affairs

Research Assistant

January 2020 – January 2021

Providence, RI

- Developed an [online OCR engine](#) that outputted the English and Chinese text contained within pdf and image files using Vue, Pytesseract, and Flask
- Created a rich text editor for results via Tiptap.js and an output emailing service via flask-mail
- Developed python and scala scripts for processing the metadata from 1960s Chinese government cables

Brown University Computer Science

Undergraduate Teaching Assistant

August 2020 – Present

Providence, RI

- Created a web interface with Scalatra and Sapper.js for students to use in their projects to validate results
- Helped develop the solution code and testing suite for students' final model-checking project
- Held office hours where I helped students debug their work and taught key computing concepts in lab hours

🔬 Projects

Timbre Music

[timbremusic.tk](#)

- Developed a sample sharing site for musicians using Java Spring Boot, Mysql, Go, Next.js, and Docker
- Developed support for custom user avatars, file sharing, intelligent music recommendation, audio playback and download, customized user settings, and liking songs
- Used Next.js to prefetch data and support css modules, and used react-spring for custom animations

Kathy Chatty CMS

[blog.ashley-chang.me](#)

- Created a hybrid content management system and blog using Next.js, React, Flask, and Postgresql
- Used the python manmouth for docx support, Draft.js for rich text editing, and Next.js for live refreshing

⚙️ Skills

Expert Java, Python, Scala, and React

Proficient SQL, Bash, C, Vue, Svelte, and Git

🕒 Activities

Beatboxer for Ursa Minors acapella group, writing instructor for SEADD, Meiklejohn peer advisor