

# James Huang

Software Engineer

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## Experience

Software Engineer – **Dev-Overflow** March 2024 – Present

- Developed **Python** scripts leveraging **Playwright's** automation suite to scrape 20+ banking websites for newly published bank circulars, hashing circulars for storage in **DynamoDB** and triggering email notifications for subscribers using **Postmark**
- Automated scraping select banking websites for newly published bank circulars utilizing Python scripts and **AWS Lambda** handler functions, ensuring client notifications within 12 hours of a new circular being published
- Wrote unit testing for individual scrapers and custom utilities using **Python's native unittest framework**, raising value and type exceptions to application layer handler functions to allow for rapid identification of failed scraping attempts

Software Engineer – **OSLabs** May 2023 – March 2024

- Created and co-founded **NextSketch** (Open Source) – Next.js prototyping tool
- Leveraged **React** to build a custom front-end components including, a file system, drag-and-drop elements (**dnd-kit**), a collapsible tree visualizer (**D3.js**) and a code preview window (**Prism.js**), allowing the development of a feature-rich tool
- Constructed an **Express** server for a high-performance **RESTful** application architecture to facilitate directory and file creation using **Node.js** file system module and to export prototyped Next.js project, enabling simple project sharing and distribution
- Launched the application with **Node.js** runtime in **Electron** to leverage Chrome's V8 Engine for seamless Next.js file, component, and page endpoint creation across Windows, macOS, and Linux environments
- Built with **Vite** to enable efficient dependency handling and hot module reloading for faster build and server cold start speeds
- Expanded **TypeScript** coverage by 85% to prevent runtime errors, strengthen compile-time type safety, simplify debugging, improve code quality and readability, and streamline the development process
- Designed with **MaterialUI's** extensive suite of customizable pre-built components and theming capabilities to optimize the styling process, resulting in faster development cycles and consistent design patterns throughout the application
- Added testing with **Jest** and **React Testing Library** for mocking folder and file creations and validating the precision of drag-and-drop behaviors, providing detailed feedback to improve user experience and retention

## Open Source Contributions & Projects

**Alley** – Tennis Court Locator

- Integrated **Redux Toolkit** to design a compartmentalized store architecture for managing search filters, cached court data and user preferences, ensuring consistent data access across different containers
- Implemented **React Router** to enable URL-based routing for intuitive navigation of court locations without page reloads

**Clearview** – Chest Cancer Diagnosis Tool

- Developed a deep learning model in **Python**, leveraging Convolutional Neural Networks and image recognition, to achieve a 90% accuracy rate in detecting and classifying chest cancer types
- Utilized geometric and photometric data augmentation techniques to enhance data quality and model performance, reducing overfitting and bias

## Skills

### Programming Languages

JavaScript (ES6), TypeScript, HTML5, CSS, Sass, Python, SQL

### Libraries & Frameworks

React, Next.js, Node.js, Express, Tailwind, Redux, Jest, Playwright, TensorFlow, Keras

### Tools & Platforms

Git, GitHub, Postman, MongoDB, PostgreSQL, webpack, AWS, Docker, Babel, Vercel

## Education

### Stony Brook University

Bachelor of Arts in Biology & Minor in Health, Medicine, and Society

## Speaking Events

### Web Security Mechanisms

Bractlet Software Engineering Speaker Series

## Publications

### Supercharge Prototyping with NextSketch

## Interest

Dragon boat racing, lion dancing, cooking, snowboarding, pickleball, running, handball, rock climbing, Teamfight Tactics