HANQING CHEN

SOFTWARE ENGINEER

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EDUCATION

University of California, Berkeley
B.A. Molecular & Cell Biology,
Infectious Diseases Emphasis
2011 – 2015

App Academy
Software Developer
2018

SKILLS

Backend:
Ruby
Ruby on Rails
PostgreSQL
MySQL

Frontend:
JavaScript
React.js
Redux.js
Angular.js
HTML5
CSS3/SASS

Testing:
RSpec
Capybara
Jest
Enzyme

Design:
Adobe Illustrator

Misc:
Git
Amazon AWS

Experience

Software Engineer | *Vitagene (Startup)* Oct 2018 - March 2019

- Leveraged expertise in Redux.js to eliminate excessive API calls between web page transitions, reducing loading times for users as they browse between different reports by around 80%.
    - Implemented checks for *Invalidated* state before dispatching actions, ensuring that API calls are only performed after report generation/regeneration in backend, not everytime when a component mounts.
- Independently accomplished the overhaul of three core vitagene website components – constituting over 50% of user health reports – using React/Redux and Styled Components, leading to about 30% higher user retention rates.
    - Incorporated various front-end libraries to render a dynamic map of a user's ancestry information in the new Ancestry Report.
    - Through frequent communications with the graphics design team, created pixel-perfect reproductions of UI mockups in overhauled components.
- Collaborated with the rest of the engineering team to transition Vitagene's front end framework from Angular.js to React.js and Redux.js.
- Integrated Mixpanel plugins to provide anonymized user activities and other analytic data to the marketing team and the products team.
    - Analyzed user trends and optimized overall style of the Vitagene website to improve browsing experience for mobile users, resulting in an increase of 20% to our overall site traffic.
- Worked closely with the Science team to update nutrition algorithms and report contents based on new findings and discoveries.

Staff Scientist | *PacGenomics Inc.* Nov 2015 - June 2018

- Advised and implemented the UI/UX portions of the physicians' web portal, including designing and testing new features, such as document preview and upload, that streamlined the app's interface while providing additional functionalities.
- Programmed automated liquid handling device with protocols to run experiments, which reduced assay runtimes by up to 50%. Additionally, instructed co-workers on the operation of the liquid handling devices.
- Identified and corrected many inefficiencies in our testing pipeline, reducing the turnaround time for rush cases to under 16 hours from over a day previously.

PERSONAL PROJECTS

Flipr - *Ruby / Rails, PostgreSQL, Amazon AWS, JavaScript(ES6), React.js, Redux.js, HTML5, SASS*
Single-paged photo-sharing web application that allows users to upload photos, and curate their own albums. Features user authentication and responsive photo displays.

- Implemented BCrypt for password hashing, and React Router in conjunction with session tokens for restricted pathing to prevent unauthorized access.
- Leveraged React render functions and components to dynamically switch the page's background based on a user's location.
- Integrated Amazon S3 cloud storage solution with PostgreSQL database backend using ActiveStorage queries, resulting in a smoother user experience and better application scalability in the future.

Super Smash Browser - *JavaScript, HTML5 Canvas, CSS, Adobe Illustrator*
A chrome extension that allows users to selectively hide elements in a webpage. Users can choose different animations that accompanies the actions.

- Manipulated JavaScript DOM to select and interact with objects displayed on a webpage.
- Created new HTML5 canvas elements on top of said DOM objects to render destruction animations.
- Designed and animated custom cursors using Adobe Illustrator.
- Facilitated collaboration through careful system design, consistent Git workflow, object oriented programming, and modular code.

Canvas Pacman - *JavaScript, HTML5 Canvas, CSS*
A JavaScript(ES6) remake of the classic PacMan game.

- Designed multiple levels using boundary mapping with an array in HTML5 Canvas.
- Used randomized number generator to implement a rudimentary AI that pursues the player character.