

Alex Duveneck

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Driven Full Stack Software Engineer passionate about designing clear, modular, and robust software solutions to optimize existing workflows and deliver business solutions. Experienced in all aspects of software development, from gathering requirements to testing and deploying.

EXPERIENCE

Cradle Genomics

San Diego, CA

Software Engineer

August 2020 – September 2021

- Tested, developed, and deployed software updates independently and with supervisor while adhering to agile methodology
- Architected modular and flexible internal form services to reduce patient intake time by over 50%
- Spearheaded internal React Component Library with TypeScript and Storybook for documentation and development ease, and packaged the library via rollup.js to modularize code and minimize package size via tree-shaking
- Designed polymorphic input classes that encapsulated rendering, validation, and pre-population to simplify creating and implementing new input types
- Implemented dynamic validation via the Chain of Responsibility pattern to simplify backend JSON structure and ensure flexibility in handling varying types and quantities of conditions
- On-boarded third-party software consultants to internal code base by delegating tickets and pair-programming together
- Introduced non-technical co-workers to YML, JSON, python, and git to empower them to manage simple configuration files and invoke simple bash/python scripts as necessary
- Wrote custom python scripts in conjunction with third-party Illumina APIs to customize the inventory system to interact with external software and analysis pipelines

Bayer

West Sacramento, CA

Laboratory Technician

December 2017 – August 2018

- Crafted a web app with R-Shiny, HTML, and Javascript for interactive data analysis and visualization
- Identified shortcomings in preexisting software and developed an alternate pipeline to screen and analyze genetic data via HDBSCAN and consensus clustering, reducing wait time by 15 hours
- Benchmarked and optimized code to run on high-performance clusters, reducing execution time by an additional 90%
- Tracked weekly progress in bilateral meetings with supervisor and presented key findings to the end-client and global department heads via reports and presentations

PROJECTS

1000px (Ruby on Rails, React, Redux, Webpack, PostgreSQL, AWS S3, CSS3, SCSS)

[Live](#) | [Github](#)

Pixel-perfect tribute to 500px with full photo CRUD, seeded with my personal photos

- Hosted images in AWS S3 buckets while storing metadata within the database to enable scalability
- Paginated traditional index to manually implement infinite scroll, reducing load time and enhancing user experience
- Implemented Jbuilder in the Views to shape the JSON output from API requests to maintain a flat Redux State

GetYoked (Mongoose / MongoDB, Express, React, Node.js)

[Live](#) | [Github](#)

A simple, wholesome, fitness app that tracks your growth and gives you new workouts

- Collaborated with 3 classmates to learn and complete a MERN project within a week, documenting and managing progress
- Designed functions to calculate the user's achievements progress, gamifying the UX
- Refactored code into modular async await functions and callbacks to handle asynchronous promises

SKILLS

TypeScript, Python, React, AWS, Node.js, Express.js, Ruby on Rails, AJAX, SQL, NoSQL, Git, HTML5, CSS3, SASS / SCSS, MaterialUI, jQuery, D3.js, Object Oriented Programming, Functional Programming

EDUCATION

App Academy

San Francisco, CA

Curriculum of Study in Web Development (Ruby on Rails and JavaScript)

August 2019 December 2019

University of California - Davis

Davis, CA

BS in Biology (Emphasis: Molecular and Cellular Biology); College of Biological Sciences

Class of 2017

BA in Economics; College of Letters and Science

Class of 2017

Minor in Statistics; College of Letters and Science

Class of 2017