

# Alexander Duveneck

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## 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*

- Combined ActiveStorage with AWS S3 Buckets to store images in the cloud with image information in the database
- Designed database with joins tables and indexed foreign keys to minimize data duplication and enhance data retrieval
- Paginated traditional index to manually implement infinite scroll, reducing load time and enhancing user experience
- Reused HTML class assignment with SCSS mixins for cohesive styling and increased site performance
- Implemented Jbuilder in the Views to shape the JSON output from API requests to maintain a flat Redux State
- Utilized BCrypt's hashing algorithm with Auth Routes to secure user privacy and guide the user

**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
- Developed and managed a simple git workflow, reducing merge conflicts and increasing code output
- Leveraged Node.js's async single-threading with MongoDB's multi-threading to eliminate hanging threads and enhance UX
- Designed functions to automate content and formatting of the user's achievements, gamifying the UX
- Refactored code into modular async await functions and callbacks to overcome promise racing and undocumented bugs
- Simplified database seeding by designing functions to automate properly formatted JSON objects with nested documents

**Sick Maps** (JavaScript, D3)

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

*Overlays historical disease data atop a geographic map of the US*

- Leveraged D3's SVG creation with MapBox's mapping API to overlay statistical graphs atop of geographic data
- Implemented modals to overlay the visualization, providing a guided tour of the project and data
- Standardized variables across JS components to create a cohesive UX

## EXPERIENCE

**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 machine learning, 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 via reports and presentations

**UC Davis Pre-Health Student Alliance**

**Davis, CA**

*Veterinary Medicine Programming Coordinator*

October 2014 – September 2015

- Scheduled over 90 workshops with four fellow coordinators and our director
- Successfully recruited over 10,000 attendees to the largest Pre-Health Conference
- Designed and conducted personal outreach presentations to audience sizes of 20-40 in Sausalito and Berkeley

## SKILLS

JavaScript, TypeScript, React, Redux, Node.js, Express.js, Cypress, Ruby on Rails, AJAX, SQL, NoSQL, Git, HTML5, CSS3, SASS / SCSS, MaterialUI, jQuery, D3.js, API, Machine Learning, Python, OOP, AWS S3

## 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