

# Michael Hollingworth

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## SKILLS

C++, C, C#, Java, JavaScript, React, Redux, HTML, CSS, SASS, Ruby, Ruby on Rails, Python, Mongoose, MongoDB, GraphQL, Node.js, Express.js, SQL, SQLite3, PostgreSQL, Webpack, jQuery, Git, Heroku, AWS S3, AWS IAM, Google Cloud API, Unity 3D, BCrypt, Object-Oriented Programming, Advanced Data Structures, TypeScript, Qt, Linear Algebra, Linear Optimization, Haskell

## EXPERIENCE

### Plugin Developer Intern

HealthStream Verity

Oct 2018 - Dec 2018

- Implemented 10 C# plugins that intelligently queried health provider databases so that users using the parent app could choose the database for their state
- Engineered sophisticated regex to scrape HTML results and parse them into data
- Adapted asynchronous request interface to different web technologies - React, Angular, and others - used by the database sites resulting in clean and efficient queries

### Executive Leadership Team - Inductions

National Society for Leadership and Success

Mar 2018 - Jun 2019

- Developed an app which interfaced with the Google Sheets API to assign quarterly incoming members to advisors on the executive board, replacing a task that had previously been done manually
- Trained incoming executive board members on managing events and executive board logistics, resulting in a smooth transition to a new executive board after graduation
- Spearheaded induction strategy overhauls, increasing induction rate by 20%

## EDUCATION

### Web Development - App Academy

Summer 2020

Intensive 16-week program which focused on web development with Ruby, Rails, React, Redux and MERN.

### BS Mathematics and Computer Science - University of California, San Diego

Spring 2019

## PROJECTS

### Turmoil (Rails, React, Redux, SCSS)

[live](#) | [github](#)

Turmoil is a discord-inspired app that provides live chat, server management, and permissions

- Implemented live chat with Rails ActionCable and Websockets, allowing users to communicate with little to no latency
- Designed the front and back end of a custom drag and drop system using a linked list, resulting in persistent reordering and nesting of servers and categories
- Developed a lightweight collection of optionally controlled React components in the vein of Bootstrap and Semantic UI, giving the entire app a cohesive appearance

### Bloom (MERN)

[live](#) | [github](#)

Bloom is a positive reinforcement-based habit-creating app which encourages users to achieve their goals

- Headed a development team of 4 in creating a fully-functioning, mobile-friendly web app in 5 days
- Integrated a custom canvas renderer with physics engine p2.js to display a unique and rewarding visual
- Engineered Mongoose schemas to take advantage of document nesting while maintaining a flat Redux state, allowing efficient backend queries and simple frontend logic

### Reflector (JavaScript (ES6))

[live](#) | [github](#)

Reflector is a unique tower defense game built from scratch with HTML, JavaScript, and CSS

- Implemented Separated Axis Theorem collision from scratch to accurately detect when enemies are hit by lasers
- Programmed a custom ray marching algorithm resulting in pinpoint laser reflections and pixel-perfect UI interaction