

Zach Gavin

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 [Portfolio](#)  [Github](#)  [LinkedIn](#)

PROJECTS

Quill.org (ES6, React/Redux, Firebase) | [home](#) | [profile](#)

Mentored by engineering team on CMS & learning apps used by 200,000+ students.

- Making pull requests to sentence-combining app on React/Redux and layout.
- Improve admin panel with Firebase data-fields for submission sorting functionality.

GoodMOOCs (Rails, React/Flux) | [live](#) | [github](#)

Single page app for discovering & reviewing online courses built from the ground up.

- Rails backend serves a RESTful JSON API to React/Flux frontend.
- Suggests courses with algebraic algorithm based on subject and past review activity.
- Builds indexed search tables for efficient lookup.

Bounce Around (Javascript, HTML5) | [live](#) | [github](#)

Browser game on HTML5 Canvas.

- Simulates realistic recoil / bounce algorithms using vector algebra.
- Simplifies keypress handling with Keymaster library.

ActiveRecord Lite (Ruby, SQL) | [github](#)

An ORM abstracting SQL queries with Ruby.

- Builds Object-Oriented relationship between Ruby classes and SQL database.
- Leverages Ruby metaprogramming to dynamically create methods to edit db models.
- Optimizes data retrieval with complex SQL joins rather than sequential queries.

SKILLS

Ruby	Rails	SQL	HTML/CSS	TDD
JavaScript	jQuery	React	Flux/Redux	Git

EDUCATION

App Academy - Acceptance rate under 3% 2015

- Intensive web development training program emphasizing pair programming, test-driven development, and best practices in JavaScript and Ruby on Rails.

Swarthmore College - B.A. in Math and Education 2010 - 2014

- Course Highlights: Linear Algebra, Discrete Mathematics, Statistical Analysis.
- Senior Thesis: Digital Game Learning in Intermediate Mathematics Pedagogy.

WORK

Development Assistant - Philadelphia Education Fund 2015

- Updated and maintained hundreds of donors' data in Raiser's Edge.
- Conducted prospective donor research each month.

Ocean Lifeguard - National Park Service 2014 - 2015

- Controlled high stress emergency situations as leader of specialized team.
- Supervised 1000+ visitors per day across one quarter mile of shoreline.
- Trained rigorously for physical operations and vital medical activities.