Zach **Gavin**

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📁 **Portfolio**   🌐 **Github**   in **Linkedin**

PROJECTS

GoodMOOCs *(Rails, React/Flux)* | live | github
Web app for discovering and reviewing online courses.
• 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.

BounceAround *(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**	**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.