

## Projects

### CheckMate (Ruby on Rails, React-Redux, PostgreSQL, HTML5, CSS3) | LIVE | GitHub

A single-page expense sharing web application inspired by Splitwise

- Active record query methods designed to make a minimal amount of queries that is independent of the table sizes being queried, resulting in an easily scalable product.
- Adding and deleting expenses and transactions to settle expenses triggers the creation, deletion, or update of associated expense shares.
- Allows users to dynamically show or hide details and comment CRUD API for each expense on each friend page, maintaining a sleek initial page rendering.

### PokéBounce (JavaScript, EaselJS, HTML5, CSS3) | LIVE | GitHub

A browser-based game inspired by JezzBall

- A dynamic area capture game where the player attempts to build walls while avoiding the balls bouncing around the playing field.
- Features an algorithm that recursively maps out all subdivisions of the playing field and automatically fills in any unoccupied subdivisions.

### oMap (Ruby, SQL) | GitHub

A light-weight ORM to connect ruby classes to SQL based relational data tables

- Allows users to define associations between model classes that can be used to generate SQL queries from oMap's API.
- Makes model classes to be searchable by their column info in the database.

## Languages and Technology

Ruby	Ruby on Rails	JavaScript	jQuery	React	Redux	SQL
Git	HTML5	CSS3	MATLAB	SolidWorks	ANSYS	

## Education

### New York, NY App Academy Summer 2016

- Immersive 1000 hour full stack and web development course, acceptance rate < 3%

### Pittsburgh, PA Carnegie Mellon University Fall 2007 – Winter 2011

- M.S. in Mechanical Engineering, December 2011. GPA: 3.67
- B.S. in Mechanical Engineering with a Minor in Music Technology, May 2011. GPA: 3.72

## Work History

### Senior Mechanical Engineer JENTEK Sensors, Inc. Spring 2012-Summer 2016

- Lead mechanical designer in adapting MWM-Array Non-Destructive Testing (NDT) technology for scanning of vessels and piping, including the successful inspection of the 1600 ft<sup>2</sup> internal surface of four hydrocracker units in just 1.5 days each during an oilfield services contract.
- Generated sales by performing field demonstrations and on-site engineering at several US military and commercial sites, as well as refineries and pipelines in China and Saudi Arabia.
- Enhanced capabilities for crack detection and sizing, corrosion detection and sizing, and stress estimation by implementing filtering algorithms for MWM-Array data using MATLAB.