# Austin Young

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## PROJECTS

### MANIFOLD | manifold.cc
Web app for task/project management and collaboration for academic research
- Monkey-patched Backbone collections to enable dynamic front end search for fields likely to be queried many times per session
- Wrote dynamic overridable autocomplete from scratch for task assignment
- Wrote user authentication using BCrypt gem with hashed and salted passwords

### REGATA | regataregata.github.io
From-scratch JavaScript implementation of regular language expressions and graphical representation of their automata with Cytoscape.js
- Implemented NFA-DFA conversion, regex-DFA conversion, DFA minimization by Hopcroft's algorithm and regular language expression parsing

### BRAP | austindyoung.github.io/BRAP
Original HTML5 Canvas physics game
- Generalizes the topological fundamental polygon to admit 4096 edge mappings for playing field

### FRONT-STAGE | github.com/austindyoung/front-stage
jQuery plugin and Backbone Collections extension for form dynamics and front-end searching
- Prevents multiple fetches from the database per form submission
- Dynamically produces matching results and autocompletes from form input, while allowing multiple models to be staged per input
- Includes default form submission

### SCALEX | github.com/austindyoung/DFA-Regex
Scala Implementation of regular language expression matching

## EDUCATION

### REED COLLEGE | B.A. Mathematics
May 2013 | Portland, OR
- Thesis: *The Finite Sums Theorem: a Topological Approach* | compactification.co

## WORK EXPERIENCE

### PRIVATE TUTOR | Math and Philosophy
2013 - 2015 | Bay Area, CA
- Developed custom extracurricular lesson plans and assignments for gifted students seeking enrichment materials
- Two students were accelerated one semester in math

### INTERN | Perkins Coie, LLP
Summer 2011 | San Francisco, CA
Supervisor: Michael R. Gotham, Director of Recruiting and Retention
- Collected market, industry, company and other demographic information
- Reviewed, summarized and analyzed industry trends

Github: **github.com/austindyoung**
LinkedIn: **linkedin.com/pub/austin-young/104/2a4/291**

## SKILLS

Ruby
Scala
Ruby on Rails
Javascript
Backbone.js
OO-design
jQuery
SQL
HTML
git
CSS
Haskell

## COURSEWORK

Programming Language Theory and Design

Algorithms and Data Structures

Combinatorics

Topology

Abstract Algebra