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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

## BRAP | austindyoung.github.io/BRAP

Original HTML5 Canvas physics game

• Generalizes the topological fundamental polygon to admit 4096 edge mappings for playing field

### **DFA-REGEX** | github.com/austindyoung/DFA-Regex

Scala Implementation of regular language expression matching

- Implemented deterministic and nondeterministic finite automata (DFA, NFA) to evaluate string matching
- Wrote conversion methods between DFAs and regular language expressions
- Wrote recursive descent and shunting yard parsers for user input

### 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

# **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

00-design

jQuery

SQL

 $\mathsf{HTML}$ 

git

CSS Haskell

# COURSEWORK

Programming

Language Theory and

Design

Algorithms and Data

Structures

Combinatorics

Topology

Abstract Algebra