Jacob Powers

700 Illinois Street, Unit 204 • San Francisco, CA 94107
757-784-8612 • powersjcb@gmail.com
powersjcb.github.io • github.com/powersjcb • linkedin.com/in/powersjcb

Portfolio

Slick slickapp.io
Chat application inspired by Slack
- Single page app built with Backbone.js and Rails
- Real-time group chat using WebSockets
- Provides "is-currently-typing" feature using Pusher Client API
- Infinite scrolling with smart page scroll that accounts for browser caching and loading of images

Dodgeball live game
Javascript keep-away game built with HTML5 canvas
- Moving objects use homebrew isentropic momentum model
- Uses quadtrees for efficient collision detection

FreeCell
Text based version of classic FreeCell
- Supports moves of stacked sequential cards

Skills

Ruby, Ruby on Rails, JavaScript, jQuery, Backbone.js, HTML, CSS, SQL, Git

Work Experience

SLAC National Accelerator Laboratory (Stanford University)   **Menlo Park, CA**
Mechanical Engineer — Large Synoptic Survey Telescope   January 2014 - April 2015
- Led a team of 3 commissioning, operating, and testing cryogenic refrigerators for $150m camera
- Learned SQL and R to analyze refrigerator temperature data, used results to guide on-going system development
- Developed new procedures and integration specs, wrote documentation for cryo-refrigerators

Jefferson Lab   **Newport News, VA**
Mechanical Engineer I   March 2012 - December 2014
- Responsible for developing, analyzing, and testing mechanical systems for particle accelerators
- Analyzed complex thermal/structural systems, created finite element models using ANSYS, delivered clear documentation of the results
- Facing budget cuts, delivered novel cryogenic thermal test system for 10ft diameter superconducting magnets with limited schedule and budget.

Education

App Academy   **San Francisco, CA**
Intensive full stack web-development program (5% < acceptance)   April 2015

Virginia Polytechnic and State University   **Blacksburg, VA**
Bachelors of Science in Mechanical Engineering   December 2011