

# Sam Schaack

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[samschaack.com](http://samschaack.com) | [github.com/samschaack](https://github.com/samschaack)

## Recent Projects

reddit++ - [psireddit.com](http://psireddit.com) | <http://github.com/samschaack/redditclone>

- wrote custom SQL queries for front page and sub pages in order to avoid  $n + 1$  queries when fetching post data.
- wrote full single-page authentication using rails and Backbone.js.
- wrote my own functions for mouse-drag-expandable images and infinite scroll instead of using libraries.
- conceived of and implemented the features 1) intra-site tabs (useful for a fully single page site- especially one like reddit) and 2) a site navigation search box, visible on every page, which takes various commands and translates them into actions. This allows the site to be entirely keyboard-navigable.
- wrote over a thousand lines of css in an effort to make it look better than the real reddit.
- learned a lot about how client-side and server-side frameworks interact, and what the proper role is of each.

asteroids - [samschaack.com](http://samschaack.com) | [github.com/samschaack/asteroids](https://github.com/samschaack/asteroids)

- implemented a large playing space (as opposed to the typical screen-sized space).
- implemented gravity and collision physics.
- wrote various optimizations (mostly related to not calculating properties of or drawing objects unnecessarily). This allowed the playing space to be very large and contain a correspondingly huge number of asteroids without affecting performance.
- currently in the process of writing a node server for multiplayer functionality.

## Skills

- ruby, rails
- javascript, jQuery, Backbone.js
- SQL
- HTML/CSS
- git
- music production utilizing FL Studio

## Education

bachelor of science, physics - University of Washington - 2009-2013

minor in math

- physics: electromagnetism, quantum mechanics, special relativity, analog/digital circuits
- math: multivariable calc, diff eq, linear algebra, linear analysis, fourier analysis, statistics