

# Sam Schaack

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

## Recent Projects

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

- wrote custom SQL queries for front page and sub pages in an effort to avoid  $n + 1$  queries.
- wrote full single-page auth in Backbone.js.
- wrote 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) and 2) a site navigation bar, present on every page, that is activated by certain letters and allows the site to be entirely and smoothly keyboard-navigable.
- used css to implement a simple solution for infinite nested comments.
- learned a lot about how front-end and back-end frameworks interact, and what the proper role is of each.

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

- conceived of and implemented a large map (as opposed to the typical screen-size map) with ship held always at center-screen.
- implemented gravity and collision physics. Collision between two moving bodies was particularly challenging.
- wrote various optimizations (mostly related to not calculating properties of or drawing objects unnecessarily). This allowed the map size to be very large and contain many 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 - [samschaack.com/music.html](http://samschaack.com/music.html)

## 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