

Stephen Brokaw

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Recent Projects

Do-dat: Single-page Backbone task-management application, consuming REST Rails JSON API. Advanced Backbone-on-Rails patterns such as overriding `Model#parse` to achieve Rails-like associations between cards and lists. A board view is a composite of lists and cards, keeping code organized and avoiding entire page re-rendering. Custom-built authentication stores passwords securely. Overrides ActiveRecord's metaprogrammed `password=` method to insert BCrypt hashing.

(*Rails + Backbone*) <http://dodat.in> | [Github](#)

Snake: The arcade classic. CSS styling with dynamic divs, jQuery for DOM interaction.

(*Javascript*) [Snake](#) | [Github](#)

Rails Redux: Rebuilt Rails router, view, and controller functionality, including dynamic route generation through regex parsing, template rendering, session-storing, and more. (*Ruby*) [Github](#)

Active Record Redux: Clone of Rails object-relational mapping system. (*Ruby*) [Github](#)

Skills

Ruby, Rails, JavaScript, Backbone.js, SQL, PostgreSQL, HTML, CSS, TDD, RSpec, Capybara

Employment History

Research Technologist I to III, Northwestern University - Center for Genetic Medicine (Fall 2009-Spring 2014)

- Sequenced genomes on the SOLiD platform to digitize genetic material. Acted as lab's internal expert for all next-generation sequencing technologies.
- Ran data analyses to reveal patterns using various number-crunching solutions.
- Managed MySQL databases over SSH. Set-up data integrity protocols. Moved terabytes of data across labs using FTP.
- Many research projects led to publication in peer-reviewed scientific journals.

Education

Northwestern University, Chicago, IL

M.S., Predictive Analytics, 2012-present

- 3.9 GPA
- 9/11 classes completed, final two to be completed remotely as evening classes.
- Coursework: data-modeling, database-design, statistical-analysis, text-analytics, data-mining, and data-warehousing.

Oakland University, Rochester, MI

B.A., Philosophy, Biology minor, 2003-2007

- 3.8 GPA
- Graduated *cum laude*, with honors.