Lily K. Riopelle

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Recent Projects

Smart Cookie (Rails, Backbone.js, jQuery) | LIVE | GITHUB
Collaborative recipe development platform with annotations based on Genius
- Backbone.js front end consumes a RESTful JSON API served up by Rails.
- Allows nested and overlapping annotations, a feature that Genius does not currently support.

Asteroids (Javascript, HTML5 Canvas, jQuery) | LIVE | GITHUB
Browser game inspired by the arcade classic
- Randomly generates irregular polygonal asteroid geometry.
- Uses trigonometry and transformational geometry to approximate physics and render objects.

ActiveRecord Lite (Ruby) | GITHUB
Ruby ORM inspired by Rails' ActiveRecord Library
- Generates and executes custom SQL queries to replicate Rails associations.
- Utilizes some of Ruby's advanced language features, such as meta-programming and reflection.

Java Compiler (Java) | GITHUB
Compiler for a subset of the Java Programming Language
- Optimizations include common subexpression elimination and polymorphic inline caching.
- Supported language features include inheritance and interfaces.

Education

Williams College, BA in Computer Science and Theatre, cum laude
Highlighted Courses
Compiler Design, Computer Graphics, Graph Theory, Game Theory, Discrete Mathematics, Theory of Computation, Computer Organization, Algorithm Design and Analysis, Programming Languages

App Academy
Competitive (< 5% acceptance rate) Web Development immersive focusing on Rails and Javascript.

Skills

JavaScript, Ruby on Rails, SQL, jQuery, Backbone.js, Java, Python, C++, C, HTML, CSS, Git, SVN

Experience

Computer Science and Math Tutor, Tutor Associates, 2014-2015
- Tutored students in math and computer science.
- Developed original Python curriculum for programming students.

Teaching Assistant, Williams College Department of CS, 2012-2013
- Courses: Introduction to Computer Science and Creating Games.
- Helped students design and implement projects in Java and JavaScript.