

Patrick Sandquist

74 Lansing St • San Francisco • 94105
patricksandquist@gmail.com • 415.378.7418

[GitHub](#) • [LinkedIn](#) • [Personal](#)

Projects

RubyOff (Ruby on Rails, React.js)

[GitHub](#) • rubyoff.xyz

A sandboxed Ruby platform that makes learning to code a fun and interactive process.

- Executes foreign Ruby code in a secure and controlled server sandbox
- Single-page React.js application built on a RESTful JSON Rails API
- Formats and highlights code by utilizing the CodeMirror library
- Nested associations create information rich pages

Sidewinder (Javascript)

[GitHub](#) • [Live](#)

Snake with a "twist"!

- Turbo mode changes the stepping interval when space bar is depressed
- Uses CSS transitions to add a new dimension to gameplay

ActiveRecord Lite (Ruby)

[GitHub](#)

An ORM inspired by the functionality of ActiveRecord

- Utilizes Ruby's metaprogramming capabilities
- Translates Ruby commands into efficient SQL queries

Skills

Ruby

Ruby on Rails

Python

Javascript

jQuery

Fortran

SQL

HTML5

CSS

Git

Education

App Academy (San Francisco, California)

8/2015 – 11/2015

Full-stack web development training program

University of St Andrews (St. Andrews, Scotland)

8/2010 – 6/2015

MPhys (Honours) Astrophysics

Dissertation: *Nonlinear Oscillators and Dust Scale Heights in Protoplanetary Discs*

- Courses included: Computational Physics and Astrophysics, Monte Carlo Simulations, Bayesian Statistics, Lagrangian & Hamiltonian Dynamics
- Grants awarded: Student Staff Council Bursary & Summer Research Award, Physics Trust Research Grant

Experience

University of St Andrews (St. Andrews, Scotland)

6/2014 – 9/2014

Summer Research Intern

- Modeled dust species condensation and sublimation as a member of the international DIANA research team
- Monte Carlo techniques were used to iteratively solve the equilibrium chemistry for 18 distinct dust species in a model protoplanetary disc
- First team member to use the SciPy Python library for result visualization

Isaac Newton Group of Telescopes (La Palma, Canary Islands) 6/2013 – 9/2013

Summer Research Student

- Wrote, tested, and optimized Python scripts for flat field automation on the Isaac Newton (INT) and William Herschel (WHT) Telescopes
- Reduced images to produce a color photometry catalogue of stars in M71