

Raphael Reyna

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PROJECTS

Subseries Web App

A full-stack web app for computing massively parallel evaluations of complex valued functions in real time using WebGL. Front end is written in Javascript and JSX with a custom ReactJS components. Backend is written in python and is running as a docker container on Heroku. Can be used to make really pretty fractal animations.

- **Languages Used:**

HTML, Javascript, JSX, CSS,
Python, YAML

- **Platforms/Frameworks Used:**

WebGL, ReactJS, Heroku, Docker,
SymPy, Babel, Webpack, Unicorn,
Flask, Materialize CSS

LWP Splitter

Containerized server application that generates and stores mathematical data in a custom designed PostgreSQL database. Provides a RESTful API for controlling the data generation process. Can produce plots of SQL queries, as well as generate labeled training data for machine learning.

- **Languages Used:**

Python, PL/pgSQL, SQL, Bash,
YAML

- **Technologies Used:**

Flask, Numpy, Pillow, PostgreSQL,
Docker

Wine Quality

A report on the analysis of various machine learning models to determine wine quality based on physical data. Involved designing and fitting various statistical machine learning models to wine data by hand, and evaluating their performance in predicting wine quality.

- **Languages Used:**

R, Mathematica, Python, LaTeX, R Markdown

TinyTerm

A macOS app; a small terminal emulator that lives in the menu bar.

- **Languages Used:**

Swift 4

- **Technologies Used:**

Darwin, Foundation, Cocoa

RELEVANT WORK EXPERIENCE

Cal Poly Pomona, Pomona, CA

Mathematics Instructor

2015 - Present

Responsibilities included designing a course schedule, complete with lecture and evaluation material; as well as leading the class through the material and regularly conducting evaluations of student performance.

Courses taught include: Calculus I, Calculus II, Trigonometry, College Algebra, Remedial Mathematics.

EDUCATION

Cal Poly Pomona, Pomona, CA

B.S. Applied Mathematics and Statistics with a minor in Physics, 2015

M.S. Pure Mathematics, expected summer 2019

RELEVANT SKILLS

Arduino, Bash, Babel, BSD, Build Automation, C, C++, Carthage, Clang, CocoaPods, Data Science, Docker, Emacs, ES6, Flask, Forecasting, Full stack web development, GCC, GDB, Git/Github, iOS, Linux, LLDB, macOS, Machine Learning, Mathematica, Nginx, NodeJS, NPM, OpenCL, OpenGL, PID, Pip, PostgreSQL, PyPi, R/RStudio, ReactJS, Responsive web design, REST APIs, SQL, Time Series, WebGL, Webpack, Xcode

OTHER

3D Printing, CAD, Circuit Design, Hardware Design, Italian, Soldering, Spanish