

Raphael Reyna

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PROJECTS

Subseries Web App

A purely client side application written in vanilla JS. Utilizes both of HTML 5's Canvas contexts, WebGL and 2D, to compute and render computationally expensive fractals in real time.

- **Languages Used:**
HTML, Javascript, CSS

- **Platforms/Frameworks Used:**
WebGL, HTML canvas API, Math.js

LWP Splitter

Containerized backend to a web app for studying polynomials roots; generates and stores mathematical data in a 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, Flask-Restful, 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, and evaluating their performance in predicting wine quality.

- **Languages Used:**
R, LaTeX

TinyTerm

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

- **Languages Used:**
Swift 4

- **Technologies Used:**
Darwin, Foundation, Cocoa

RELEVANT 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

*Nix, Arduino, Bash, BSD, C, C++, Carthage, Clang, Cocoapods, Data Science, Docker, Emacs, ES6, Flask, Forecasting, Full stack web development, GCC, GDB, Git/Github, GPGPU, Gunicorn, iOS, Linux, LLDB, macOS, Machine Learning, Make, Mathematica, Nginx, NodeJS, NPM, OpenCL, OpenGL, PID, Pip, PostgreSQL, PyPi, R/RStudio, Responsive web design, RESTful APIs, SQL, Time Series, UNIX, WebGL, Xcode,

OTHER

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