Raphael Reyna

Email: raphaelreyna@protonmail.com
Phone: (626) 384-1342
Site: www.raphaelreyna.works

PROJECTS

TinyTerm A macOS app; a fire-and-forget terminal emulator that lives in the menu bar. Uses the Darwin framework to maintain an active PTY session running a shell. A shortcut brings up a dialog to enter commands to be ran.

- **Languages Used:** Swift 4
- **Technologies Used:** AppKit, Carthage, Darwin, Xcode

Chapters A macOS app for splitting PDFs into smaller PDFs. Can split PDFs based on a user defined layout, or using the table of contents of the PDF to split it into its chapters. If a PDF is split based on its table of contents, the files are saved in a structured directory that reflects the structure of the table of contents.

- **Languages Used:** Swift 4
- **Technologies Used:** AppKit, Carthage, PDFKit, Xcode

Subseries Plotter A python app that uses GPGPU to render computationally expensive fractals. Uses OpenCL to compute the fractal data, and then OpenGL to plot the data. OpenCL and OpenCL are used interoperably in order to minimize the performance hit due to context switching.

- **Languages Used:** Python 3, OpenCL C, GLSL C
- **Technologies Used:** OpenGL, OpenCL

LWP Splitter Fully containerized application that generates and stores mathematical data for research. Uses PostgreSQL to not only store data but to efficiently prepare the data for consumption by machine learning algorithms for training. A python app generates the data and sends it to the PostgreSQL database, while providing a REST API to control the data generation process.

- **Languages Used:** Python, PL/pgSQL, SQL, Bash, YAML
- **Technologies Used:** Flask, Flask-Restful, Numpy, Pillow, PostgreSQL, Docker

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:

- Calculus I *and* Calculus II
- College Algebra
- Trigonometry
- 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

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, NodeJS, NPM, OpenCL, OpenGL, PostgreSQL, PyPi, R/RStudio, RESTful APIs, SQL, UNIX, WebGL, Xcode,

OTHER

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