Raphael Reyna

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Open Source Projects

EinsteinPy (Contributor)

EinsteinPy is an open source pure Python package dedicated to problems arising in General Relativity and gravitational physics. My contributions to the project were to increase performance by using my background in math to exploit symmetries in some of the underlying matrix and tensor computations. URL: github.com/einsteinpy/einsteinpy

- **Languages Used:** Python, Wolfram Language
- **Technologies Used:** Wolfram Mathematica, Group Theory, Tensor Algebra

Oneshot (Author)

A first-come-first-served, single-fire HTTP server. Easily transfer files to and from your computer and any browser. Features include: HTTPS (including self-signing certificates), authentication, archiving, mDNS, CGI environment with defaultable headers, serve from stdin, upload to stdout and more. URL: github.com/raphaelreyna/oneshot

- **Languages Used:** Go, HTML
- **Technologies Used:** HTTP, SSL/TLS, mDNS, CGI (RFC 3875)

LaTTe (Author)

LaTTe provides programmatic document generation as an HTTP service. Users submit a templated LaTeX, following Go's templating format, and a JSON object and any resources they may need (such as images) to produce a PDF document. Supports registering template and resource files to reduce traffic, CORS, caching, and has a flexbile persistence model. URL: github.com/raphaelreyna/latte

- **Languages Used:** Go, Shell, TeX
- **Technologies Used:** Docker, Bash, pdfTeX/pdfLaTeX

Subseries Web App (Author)

A full-stack web app for computing massively parallel evaluations of complex valued functions in real time using WebGL, written as a part of my Masters thesis on subseries of holomorphic functions. Front end is written in Javascript and JSX using ReactJS. Backend is written in python and is running as a Docker container on Heroku. Can also be used to make really pretty fractal animations. URL: github.com/raphaelreyna/subseries-webgl

- **Languages Used:** HTML, Javascript, JSX, CSS, Python, YAML
- **Technologies Used:** WebGL, ReactJS, Docker, Sympy, Flask, Materialize CSS

RELEVANT WORK EXPERIENCE

The Recovery Watchdog

Lead Software Engineer
September 2019 - Present

At The Recovery Watchdog, I designed and developed the backend to the their patient management service. The backend follows a microservice architecture, with all microservices written in Go and include tests. I also managed, and was heavily involved with the development of the frontend mobile app which was written using React Native by 4 people including myself. Additionally I wrote the Kubernetes manifests for both the development and testing deployments, which I also handled both on prem and on AWS respectively.

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

AWS, C/C++, Data Science, Docker, Flask, Git/Github, Go, iOS, JavaScript, Kubernetes, Linux, macOS, Machine Learning, Wolfram Mathematica, Nginx, NodeJS, OpenCL, OpenGL, Python, Shell Scripting, RabbitMQ, RDBMS, R/RStudio, ReactJS/React Native, REST APIs, SQL, WebGL

OTHER

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