Logan Reed

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Experience

Biosciences Research Lab Camden, NJ
Research Assistant Jan 2022 - Oct 2023

- Designed, developed, and optimized a data pipeline to aid in writing an academic paper.
- Migrated Matlab codebase to Python, emphasizing clear documentation and cutting runtime by 85%.
- Wrote an API to integrate Rutger's distributed servers, the code, and a frontend page utilizing Laravel.

Rutgers - Mathematical Sciences Philadelphia, PA
Graduate Student 2021 - 2023

- Invented and implemented an optimized parallel algorithm to test a long standing conjecture.
- Synthesized previous research in PDEs and Numerical Analysis using python/C++.
- Constructed a fully featured containerized CI/CD pipeline, emphasizing stability and correctness.
- Integrated socket-based real time visualization and playback.

Education

Rutgers University Camden, NJ
M.S. Mathematical Sciences *GPA: 3.96* 2021 - 2023

Texas State University San Marcos, TX
B.S. Applied Mathematics *GPA: 3.74* 2017 - 2021

Skills

Languages: Python, JavaScript/TypeScript, PHP, C/C++, SQL, Bash

Technology: Git, Linux, Docker, AWS, Laravel, React, Node

Projects

Personal Server *CI/CD, Linux, Docker, Python, PHP, Bash*
A self hosted server that uses a reverse proxy and docker-compose to host multiple webservices. The server automatically updates containers, creates encrypted backups, and has realtime monitoring and notification functionalities. It hosts my password manager, email, cloud storage, file syncronization, multiple fullstack webpages, and a minecraft server.

Simulating Metabolic Pathways *Python, TypeScript, PHP, Linux, SQL*
An app which computes and optimizes specific drug combinations used to treat people infected with tuberculosis. Models metabolic interactions using a generalized network object and its corresponding flow. Built a robust DevOps pipeline, and integrated APIs for human metabolic networks and microarray data. Wrapped the app in an API written in PHP. Unfortunately none of this work is public due to the accompanying paper's publication agreement.

Private Tutoring Website *JavaScript, React.js, Vite.js, MariaDB, Node.js*
A fullstack webpage which contains a landing page as well as a student portal which contains scheduling, messaging, and payment services. It is styled using tailwind.css and uses MariaDB through Node.js as the backend.

Achievements

Outstanding Scholarship Award *Rutgers University* May 2022

Four-Time Dean List Recipient *Texas State University* 2017 - 2021

Distinguished Thesis Award *Rutgers University* May 2023