Lennart Rudolph

https://lennart.page

Contact Information

lrudolph (AT) hmc (DOT) edu

Education

Georgia Institute of Technology, Atlanta, GA — **Jan. 2017 - May 2019**
M.S. Computer Science

Harvey Mudd College, Claremont, CA — **Sept. 2012 - May 2016**
B.S. Physics
- Major Concentration in Physics with Computers
- Senior Capstone: *Atomistic Simulations of White Dwarf Dynamics (LLNL)*

Skills

Go, Python, SQL, Java, bash, git
Kafka, Docker, Kubernetes, Puppet, Terraform
Amazon Web Services, Google Cloud Platform
Prometheus, Thanos, Grafana, SignalFx, Splunk

Work Experience

Software Engineer (Yelp) — **Oct 2019 - present**
As a member of the Data Streams Core team, I work on maintaining and improving the data streaming infrastructure and interfaces used for Yelp's Kafka-based data pipeline ecosystem.
Technologies used: Apache Kafka, Python, Go, Docker, Kubernetes, AWS, Terraform, Puppet, bash, Prometheus, Thanos, Grafana, SignalFx, Splunk

Back-End Developer (DailyNerve) — **May 2016 - Oct 2019**
I write and maintain code, tests, and documentation for BigNerve's DailyNerve back-end web API. I train new back-end team members and lead the development of new API features. I rearchitected and reimplemented the entire API as a platform-agnostic, containerized, microservice-based system.
Technologies used: Go, SQL, bash, AWS, Google Cloud Platform, Elasticsearch, Docker

Back-End Developer Intern (DailyNerve) — **May 2015 - Aug. 2015**
I integrated PayPal Express Checkout and other features into DailyNerve's back-end web API.
Technologies used: Go, SQL

Assistant to System Administrator (HMC) — **May 2015 - Aug. 2015**
Created new disk images for engineering department computers; performed hardware upgrades; assisted with help-desk support tickets; wrote batch scripts to optimize tasks; used and maintained 3-D printer

Physics Research Student & Physics Grader (HMC) — **Jan. 2014 - May 2014**
Used SolidWorks and Mathematica to model and simulate magnetic fields in a vacuum chamber
Graded homework for a section of Mechanics & Wave Motion

Homework Hotline Tutor (HMC) — **Sept. 2012 - May 2013**
Tutored student callers in mathematics and science from the elementary school level to the AP level

Project Experience

Clinical Decision Support Application (CDC) — **Jan. 2018 - Apr. 2018**
Our team developed a clinical decision support app for the CDC to support healthcare providers with the diagnosis and management of mTBI in pediatric patients. We leveraged HAPI FHIR and a CDS API.

Atomistic Simulations of White Dwarf Dynamics (LLNL) — **Sept. 2015 - May 2016**
Worked on a white dwarf project for the Lawrence Livermore National Laboratory's (LLNL) High Performance Computing Innovation Center as a member of a joint computer science-physics clinic team. Ran molecular dynamics simulations on the Vulcan Blue Gene Q supercomputer using LLNL's dynamic domain decomposition multi-physics particle dynamics code (ddcMD).
Technologies used: C, bash

Wormhole Simulation (HMC) — **Apr. 2015 - May 2015**
Used Mathematica, concepts from general relativity, and an approach by Kip Thorne et al. to implement a ray-traced interpolation map for the light from a wormhole (see GitHub)