

CONTACT INFORMATION	lrudolph (AT) hmc (DOT) edu	
EDUCATION	Georgia Institute of Technology , Atlanta, GA <i>M.S. Computer Science</i> Harvey Mudd College , Claremont, CA <i>B.S. Physics</i> <ul style="list-style-type: none">• Major Concentration in Physics with Computers• Senior Capstone: <i>Atomistic Simulations of White Dwarf Dynamics (LLNL)</i>	Jan. 2017 - May 2019 Sept. 2012 - May 2016
SKILLS	Go, Python, SQL, Java, bash, git Docker, Kubernetes, Puppet, Terraform Apache Kafka, Apache Flink, Apache Beam Amazon Web Services, Google Cloud Platform Prometheus, Thanos, Grafana, SignalFx, Splunk	
WORK EXPERIENCE	Principal Software Engineer (VideoAmp) Core Services - Platform Infrastructure Software Engineer (Yelp) As a member of the Streaming Applications team, I worked on maintaining and improving the data streaming infrastructure and interfaces used for Yelp's Kafka-based data pipeline ecosystem. Designed a system for deprecating unused Avro schemas and Kafka topics. Participated in on-call rotation as first line incident responder responsible for fleet of production Kafka clusters, logging infrastructure, and stream processing infrastructure. Contributed to the architecture and development of a custom Kafka Kubernetes operator, as well as the migration of Kafka clusters from EC2 to a k8s-based internal compute platform. <i>Technologies used:</i> Apache Kafka, Apache Flink, Apache Beam, Python, Go, Java, Scala, Docker, Kubernetes, AWS, Terraform, Puppet, bash, Prometheus, Thanos, Grafana, SignalFx, Splunk Back-End Developer (DailyNerve) I wrote and maintained code, tests, and documentation for BigNerve's DailyNerve back-end web API. I trained new back-end team members and led the development of new API features. I rearchitected and reimplemented the API as a platform-agnostic, containerized, microservice-based system. <i>Technologies used:</i> Go, SQL, bash, AWS, Google Cloud Platform, Elasticsearch, Docker	Mar. 2022 - present Oct. 2019 - Mar. 2022 May 2016 - Oct. 2019
MISC. PROJECT EXPERIENCE	Atomistic Simulations of White Dwarf Dynamics (LLNL) 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). <i>Technologies used:</i> C, bash Wormhole Simulation (HMC) 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)	Sept. 2015 - May 2016 Apr. 2015 - May 2015
TECHNICAL WRITING	Kafka on Kubernetes at Yelp Wrote a series of engineering blog posts about Yelp's new Kubernetes-based Kafka deployment model. https://engineeringblog.yelp.com/2021/12/kafka-on-paasta-part-one.html https://engineeringblog.yelp.com/2022/03/kafka-on-paasta-part-two.html	Dec. 2021, Mar. 2022