(925)-998-5486
https://github.com/hlokavarapu lokavarapuh@gmail.com

Harsha Lokavarapu

Education

University of California, Davis	MS	Computational Geodynamics Thesis Advisor: Professor Louise H. Kellogg	2018
University of California, Davis	BS	Computer Science	2015
	Minor	Applied Mathematics	2015

Employment

Software Engineer — Uber — 2019-2020

- Developed vInfra, a system to generate virtual infrastructure using an emulator
  - used to generate Uber's on-prem backbone
  - used by network ops to investigate network failures
- Developed IRS, a golang command line tool to track inventory and reserve assets
  - designed Service Now database schema to store reservations
  - authored scripted endpoint in Service Now to handle REST API requests
  - developed and implemented Thrift and gRPC API for reserving assets
- Developed Metere, a repository for test case definitions and test case results
  - designed database schema using SQL
  - developed and implemented thrift API to create, read, update and delete test case definitions and results
  - developed front end application to interact with test case definitions and results repository using React and Base Web

Junior Assistant Programmer — Computational Infrastructure for Geodynamics — 2014-2017

- Contributed to open-source numerical library ASPECT written in C++
  - implemented parallel particle generation algorithms
  - implemented parallel particle interpolation algorithms including harmonic averaging and bilinear least squares
  - designed 2-D analytical solution to Stokes equations and benchmarked the accuracy of particle algorithms
- Contributed to open-source numerical library, Calypso written in Fortran 90.
  - implemented and optimized spherical harmonic transform using cutting-edge GPU hardware with CUDA in C++
  - executed strong and weak scaling tests to measure performance on supercomputer Maverick
- Data analysis and automation with python
  - created data pipelines for large data transfers from cluster to cluster*
  - authored scripts to compute entropy as a funtion of time using particle positions
  - implemented carbon reservoir model with interactive widgets to help scientists analyze the influence of different initial parameter configurations on the evolution of carbon cycle

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Software Developer, Intern Humana 2012

- Wrote puppet manifests to install Humana application Healthdock's software stack for clients
- Written Puppet manifests include Apache Web Server, Tomcat, Oracle, Avahi, Samba, Java, Apelon, and Healthdock

Skills: C++, CUDA, Git, Go, gRPC, Python, Unix
(*familiar with*): numpy, ipywidgets