

**Harsha Lokavarapu****Education**

University of California, Davis	MS	Computational Geodynamics	2018
		Thesis Advisor: <a href="#">Professor Louise H. Kellogg</a>	
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 go-lang 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

**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): React, SQL