

Career Overview

- **Bharat Petroleum Corporation Limited** Mumbai, India
2009 - 2011
 - **Hariyala** In the capacity of marketing officer managing the production department, I studied the various possibilities to reduce the overloading of motors that run the chain conveyors. This resulted in the redesign of a certain section of the conveyor belt and also the timely rewinding of a motor. It also led to the building of a ramp to ease the movement of cylinders on the work floor.
 - **Bhitoni** Remote Operated valves are a key component in any petroleum plant, they are particularly important in LPG plants because they let the operator shut off the supply to fuel from remote. As an operations officer in Bhitoni I was part of the team that led the installation of ROVs on main pipelines of the plant.
- **B.Sc. Mathematics, B.Sc. Computational Physics, B.Sc. Physics** Corvallis, OR
2004 - 2008
 - Graduated Magna Cum Laude with minors in Actuarial Sciences and Mathematical Sciences

Research and Work Experience

- **SigOpt Inc - <https://sigopt.com>** San Francisco, CA
Co-founder and CEO November 2014 - current
 - Helping lead a world class team to eliminate expensive trial and error from every experts workflow. Using cutting edge optimization behind a simple API to help tune machine learning models and build better products in a variety of fields.
- **Yelp Inc** San Francisco, CA
Data Mining Engineer and Lead on Ad Targeting Team July 2012 - December 2014
 - **Optimization:** Co-developed and led team for MOE: the Metric Optimization Engine (github.com/Yelp/MOE, an **open source** optimization framework), found significant gains in different metrics across the organization using Bayesian Global Optimization algorithms.
 - **Targeting:** Implemented multi-armed bandit strategies for ad selection, sole targeting engineer on mobile app ads rollout, developed new location-based targeting algorithms, advised and helped develop other machine learning and math based targeting projects.
 - **Recruiting:** Created, implemented, and directed yelp.com/dataset_challenge, gave tech talks across the country, led events, gave hundreds of technical interviews, closed candidates.
- **Bloomberg LP** New York, NY
Financial Software Development Intern Summer 2011
 - Implemented statistical models to perform forward and backward portfolio analysis
- **DOE Joint Genome Institute (Lawrence Berkeley National Lab)** Walnut Creek, CA
Researcher in Analysis Group under Dr. Zhong Wang Summer 2010
 - Used machine learning to mine TBs of genome data efficiently using novel likelihood function

- **Los Alamos National Laboratory** Los Alamos, NM
Researcher in Metagenomics Group under Dr. Nick Hengartner Summer 2009
 – Used statistical models to discover sequence alignments using parallel algorithms on GPUs
- **Oregon State University** Corvallis, OR
Research Assistant under Prof. Malgorzata Peszynska and Prof. Rubin Landau 2005-2008
 – Finite element analysis with uncertainty and web-based teaching in Java
- **Max Plank Institute for the Physics of Complex Systems** Dresden, Germany
NSF REU Research Assistant under Prof. Steven Tomsovic Summer 2007
 – Research on extreme value statistics in MATLAB and FORTRAN
- **University of California: Davis** Davis, CA
NSF REU Research Assistant under Prof. Daniel Cox Summer 2006
 – Computational biophysics research as applied to protein folding in Java

Writing and Awards

- **2016 Forbes 30 Under 30:** Enterprise Tech. <http://onforb.es/10ILpBZ>
- **Department of Energy Computational Science Graduate Fellow:** Four year full fellowship. ~20 awarded nationally per year. Won the Communicating Science award (bit.ly/VbcTZK).
- **SigOpt Blog:** Posts talking about using SigOpt to optimize everything (blog.sigopt.com).
- **Yelp Blog:** Wrote several posts announcing the open sourcing of MOE, the Yelp Dataset Challenge and more. bit.ly/1x73xdr, bit.ly/1oCCZvv, bit.ly/1s0sEBS, bit.ly/1p1X7Hk
- **Press:** WSJ: on.wsj.com/Va0vqQ, Cornell: bit.ly/1oB2dzm, DIEXIS: bit.ly/1oofb14

Skills

- **Numerical Analysis and Computer Science:** Machine Learning, Data Mining, Optimization, Computational Science, Artificial Intelligence, Linear Algebra, Monte Carlo Methods, ODEs, PDEs, Iterative Methods, Parallel Programming, Distributed Systems, Data Structures
- **Tech Stack:** Python, numerical libraries, linux, git, vim
- **Public Speaking:** I've given several hundred technical talks to audiences at machine learning conferences, Fortune 500 boards, and beyond.
- Exploring and implementing ideas. Give me an API/dataset and a problem and I will figure it out.

Selected Open Source Projects

- **SigOpt Examples** (github.com/sigopt/sigopt-examples) Python
Examples of using SigOpt to tune ML algorithms. 2014 - current
 – Examples of using SigOpt to tune everything from sklearn to beating Vegas and beyond.

- **MOE: Metric Optimization Engine** (github.com/Yelp/MOE) Python, C++, CUDA
A global, black box optimization engine for real world metric optimization 2010 - 2015
 - Implemented throughout Yelp, optimizing ad metrics. 2nd most popular open source project.
 - Talk: bit.ly/1p1YZA2, Slides: slidesha.re/1z0r0Jy, Blog: bit.ly/1x73xdr
 - Presented to executives, universities, conferences and companies around the country.
- **ALE: Assembly Likelihood Estimator** (github.com/sc932/ALE) C, Python
Probabilistic evaluation of genome assemblies 2010 - 2013
 - Uses statistical function to score and rank genome assemblies, published in Bioinformatics