Scott Clark

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@DrScottClark

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scottclark.io
Not looking for new job opportunities

Education

Cornell University — Ithaca, NY
Ph.D. Applied Mathematics, M.S. Computer Science — *2008 - 2012*

- Department of Energy Computational Science Graduate Fellow (Full Scholarship, 4 years)
- Machine Learning, Data Science, Data Mining in bioinformatics and global optimization

Oregon State University — Corvallis, OR
B.Sc. Mathematics, B.Sc. Computational Physics, B.Sc. Physics — *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/1OILpBZ`
- **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/1sOsEBS`, `bit.ly/1plX7Hk`
- **Press:** WSJ: `on.wsj.com/VaOvqQ`, Cornell: `bit.ly/1oB2dzm`, DIEXIS: `bit.ly/1oofbl4`

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/1plYZA2`, Slides: `slidesha.re/1zOrOJy`, 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