Scott Clark

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@DrScottClark

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scottclark.io

Not looking for new job opportunities

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Education

Cornell University — **2008 - 2012**

Ph.D. Applied Mathematics, M.S. Computer Science — Ithaca, NY

- 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 — **2004 - 2008**

B.Sc. Mathematics, B.Sc. Computational Physics, B.Sc. Physics — Corvallis, OR

- Graduated Magna Cum Laude with minors in Actuarial Sciences and Mathematical Sciences

Research and Work Experience

SigOpt Inc - sigopt.com — **November 2014 - current**

Co-founder and CEO — San Francisco, CA

- 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 — **July 2012 - December 2014**

Data Mining Engineer and Lead on Ad Targeting Team — San Francisco, CA

- **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 — **Summer 2011**

Financial Software Development Intern — New York, NY

- Implemented statistical models to perform forward and backward portfolio analysis

DOE Joint Genome Institute (Lawrence Berkeley National Lab) — **Summer 2010**

Researcher in Analysis Group under Dr. Zhong Wang — Walnut Creek, CA

- Used machine learning to mine TBs of genome data efficiently using novel likelihood function

Los Alamos National Laboratory — **Summer 2009**

Researcher in Metagenomics Group under Dr. Nick Hengartner — Los Alamos, NM

- Used statistical models to discover sequence alignments using parallel algorithms on GPUs

Oregon State University — **2005-2008**

Research Assistant under Prof. Malgorzata Peszynska and Prof. Rubin Landau — Corvallis, OR

- Finite element analysis with uncertainty and web-based teaching in `Java`

Max Plank Institute for the Physics of Complex Systems   **Summer 2007**
NSF REU Research Assistant under Prof. Steven Tomsovic   Dresden, Germany

- Research on extreme value statistics in `MATLAB` and `FORTRAN`

University of California: Davis   **Summer 2006**
NSF REU Research Assistant under Prof. Daniel Cox   Davis, CA

- Computational biophysics research as applied to protein folding in `Java`

Writing and Awards

- **2016 Forbes 30 Under 30:** Enterprise Tech. `onforb.es/1OILpBZ`

- **Department of Energy Computational Science Graduate Fellow:** Four year full fellowship. $\sim$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`)   **2014 - current**
Examples of using SigOpt to tune ML algorithms.   Python

- Examples of using SigOpt to tune everything from sklearn to beating Vegas and beyond.

MOE: Metric Optimization Engine (`github.com/Yelp/MOE`)   **2010 - 2015**
A global, black box optimization engine for real world metric optimization   Python, C++, CUDA

- 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`)   **2010 - 2013**
Probabilistic evaluation of genome assemblies   C, Python

- Uses statistical function to score and rank genome assemblies, published in Bioinformatics