Dav J. W. Clark, Ph.D.

Data and Learning Scientist

917-544-8408 | davclark@gmail.com | 1201 W Mount Royal Ave #512, Baltimore, Maryland
https://www.linkedin.com/in/davclark | https://github.com/davclark

Summary

Team player who brings a pragmatic mix of tools, training, and community to bear on big challenges. Extensive and varied experience with technology including computational linguistics, statistics, machine learning, static and interactive visualization, physical computing. Demonstrated leadership in coalition building, teaching, and project incubation across academic, enterprise, consulting and start-up settings. Fast learner looking to join a great team.

Experience

Research Scientist, Kennedy Krieger Institute, Baltimore, MD 2016-2017

Program implementation and evaluation, partnerships, developed interactive web-based learning resource using Elm, grant and academic writing.

UC Berkeley, Berkeley, CA

Fellow, Berkeley Institute for Data Science (BIDS) 2014-2016

Lead BIDS collaborative incubator for data-intensive projects with real-world impact

Data Scientist, D-Lab 2013-2016

Training and empowering data-driven social scientists, grant-writing, specified and administered "fat" compute node (ZFS, GPU), ran corporate training, management

Instructor, Machine Learning (Masters in Data Science); Hacking Measurement 2014, 2015

Chief Scientist, Oroeco / Startup Chile, San Francisco, CA / Santiago, Chile 2012-2015

Analysis of user behavior, Rails development, implemented multiple testing frameworks to encourage developer usage

Partner, KeepOpen Web Design, Euless, TX (remote) 2004-2013

Concierge-style web design and hosting using Silva (a Zope-based CMS)

Principal Scientist, Entrieva (now LucidMedia), Reston, VA 2006-2007

Analyzed and reported on the core business algorithm that no employees understood, wrote new algorithm that was comprehensible to taxonomy team, Tomcat/Spring

Skills

Programming - **Data Science:** Python, R, Spark, SQL, MongoDB, HDF5; **Visualization:** ggplot2, Matplotlib, Bokeh, SVG (D3); **Front End:** Elm, HTML, CSS, JavaScript / React, Jekyll; **Back End:** Ruby on Rails, Express, Python, Tomcat
Ops - Amazon EC2 & MTurk, Docker, Ansible, Packer, Vagrant, Linux admin, system building, GPU
Science - **Data Collection:** brain imaging, physiology, computerized testing (desktop / web / mobile), surveys / crowd-sourcing, experiment design; **Statistics:** classical, Bayesian, non-parametric, time-series, machine learning
Writing - technical, grants, documentation, policy / MOU

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Education

Ph.D., Psychology, UC Berkeley 2007-2013
Thesis: Climate change and conceptual change
Research in Cognition and Math Education (RCME) Fellow
MS, Cognitive Neuroscience, MIT 1999-2002
Thesis: Neurocognitive circuitry supporting neoword learning
BA, Linguistics; BS, Computer Science; BS, Mathematics, *U of MD, College Park* 1995-1999
Thesis: Modeling language change with markov models*; Magna Cum Laude*

Selected Awards

UC Berkeley SPOT Award, outstanding service to D-Lab 2016

Harvard Business Plan Competition, runner up, ($4000 in-kind services) 2003

MIT Sloan Business Plan Competition, semi-finalist 2003

Community & Service

Data and Mental Health Working Groups, School Climate Collaborative, Baltimore, MD 2016-2017

EdX Data Czar, UC Berkeley 2015-2016

Software Carpentry / Data Carpentry, SF Bay Area 2014-2016

Discussant, Numerous panels on data collection, sharing and ethics, SF Bay Area 2014-2016

Resident, ManyLabs (a Moore-funded science hackerspace), San Francisco, CA 2015

Presenter, Bloomberg Data for Good Exchange, New York, NY 2015

Chair, social science panel at SciPy 2014, Austin, TX 2014

Training Assistant, Data Science for Social Good, Chicago, IL 2013

Sample Open Source Projects

marketflow - efficient ingest of large financial datasets http://marketflow.readthedocs.io/en/latest/

rpy2 - interoperate with R from Python http://rpy2.readthedocs.io/

NiPype - data processing graphs for brain imaging analysis http://nipype.readthedocs.io/

Hacking Measurement - incubating grad student projects http://hackingmeasurement.berkeley.edu/

MTurk Admin - longitudinal experiments on Amazon MTurk https://github.com/davclark/mturk_admin

Taichi Site - static site using Elm for video-based practice https://github.com/davclark/taichi-site

Hotaru - controlling an LPD8806 LED strip using React.js https://github.com/davclark/hotaru-material-ui