Dav J. W. Clark, Ph.D.

Data and Learning Scientist

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# Summary

I have a strong track record of getting things done and executing on collaborative data-intensive projects across academic, enterprise, consulting and start-up settings. My experience includes computational linguistics, statistics, machine learning, static and interactive visualization, and physical computing. I am a fast learner looking to join a great team.

# Experience

*Open source projects indicated with \* are linked at the end of the document.*

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| **Research Scientist**, Kennedy Krieger Institute, Baltimore, MD  *Program implementation and evaluation spanning survey, clinical, physiologic and brain-imaging data; hiring and supervision of instructional staff; partnerships; grant and academic writing; Data and Mental Health Working Groups in OSI-funded School Climate Collaborative; developed Taichi Site\* for web-based video curriculum in Elm* | 2016-2017 |
| **UC Berkeley*,* Berkeley, CA** |  |
| **Fellow**, Berkeley Institute for Data Science (BIDS)  ***Co-founded BIDS collaborative incubator for data-intensive projects with real-world impact;*** *Discussant in**numerous panels on data collection, sharing, and ethics;* *Resident at ManyLabs (a Moore-funded science hackerspace in San Francisco); contributions to rpy2 project\** | 2014-2016 |
| **Data Scientist**, D-Lab  ***Training and empowering data-driven social scientists, grant-writing, specified and administered “fat” compute node (ZFS, GPU), ran corporate training, managed undergraduate staff, trained staff and organized hosting for projects and curricula on GitHub, EdX (MOOC) Data Czar,*** *Presenter at**Bloomberg**Data for Good Exchange,**Training Assistant at U Chicago Data Science for Social Good****, big financial data including marketflow\* library, developed BCE\* data science VM for instructional and research needs in collaboration with Research IT and Statistics department****,* ***UC Berkeley SPOT Award for outstanding service*** | 2013-2016 |
| **Instructor**, Machine Learning (Masters in Data Science); Hacking Measurement  ***Developed missing “catch-up” curriculum for scientific python, automated GitHub course workflows, organized Hacking Measurement\* as an open project site*** | 2014, 2015 |
| **Chief Scientist**, Oroeco / Startup Chile, San Francisco, CA / Santiago, Chile  *Analysis of user behavior, Rails development, implemented multiple testing frameworks to encourage developer usage* | 2012-2015 |
| **Partner, KeepOpen Web Design, Euless, TX (remote)**  ***Concierge-style web design and hosting using Silva (a Zope-based CMS)*** | 2004-2013 |
| **Principal Scientist, Entrieva (now LucidMedia), Reston, VA**  ***Analyzed and reported on the core business algorithm that no employees understood, wrote new algorithm that was comprehensible to taxonomy team, Tomcat/Spring*** | 2006-2007 |

# Education

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| **Ph.D., Psychology**, UC Berkeley  *Thesis*: Climate change and conceptual change *Research in Cognition and Math Education (RCME) Fellow, helped start and architect the NiPype project\*, developed MTurk Admin\* for longitudinal online experiments* | 2007-2013 |
| **MS, Cognitive Neuroscience,** MIT  *Thesis:* Neurocognitive circuitry supporting neoword learning  ***Harvard Business Plan Competition runner up ($4000 in-kind services),*** *MIT Sloan Business Plan Competition**semi-finalist, President of MIT Graduate Student Volunteer Corps* | 1999-2002 |
| **BA, Linguistics; BS, Computer Science; BS, Mathematics**, *U of MD, College Park*  *Thesis:* Modeling language change with markov models*; Magna Cum Laude*  *Founder of Juggling Club – extensive youth outreach and education* | 1995-1999 |

# Skills

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| ***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, Arduino & Raspberry Pi; **Statistics:** classical, Bayesian, non-parametric, time-series & spatial, machine learning |
| ***Writing –*** technical, grants, documentation, policy / MOU |

# Sample Open Source Projects

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| **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/> |
| **BCE – the Berkeley Common Environment, a VM for data science** | <http://bce.berkeley.edu/> |
| **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 LPD8806 LED strip using React.js (hobby) | <https://github.com/davclark/hotaru-material-ui> |