Eric Potash

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Experience

University of Chicago 2014–Now
Post-doctoral Researcher, Center for Data Science and Public Policy

- Policy analysis and predictive modeling of lead poisoning for the Chicago Department of Public Health
- Predictive modeling of hazardous waste violations for the U.S. Environmental Protection Agency and New York State Department of Environmental Conservation

Eric and Wendy Schmidt Data Science for Social Good Summer 2016
Technical Mentor

- Mentored graduate students in analysis and development of data science solutions for public policy problems.

University of Chicago Winter 2016
Lecturer, Harris School of Public Policy

- Computation for Public Policy graduate course

Open Energy Efficiency Meter (openeemeter.org) 2015
Data Scientist
Statistical learning of residential energy consumption baselining and forecasting.

Eric and Wendy Schmidt Data Science for Social Good Summer 2014
Summer Fellow

- Modeling maternal health outcomes for the government of Mexico.
- Electricity load disaggregation for Pecan Street Research Institute.

Oroeco (oroeco.com) 2014
Scientific Software Engineer
Collecting data and building carbon footprint models and visualizations.

Northwestern University 2008–2013
Teaching Assistant: Probability & Stochastic Processes, Mechanics, Real Analysis

Education

Northwestern University 2009–2014
Ph.D. Mathematics
Dissertation: Euclidean Embeddings and Riemannian Bergman Metrics
Advisor: Steve Zelditch

Columbia University 2005–2009
B.A. Mathematics with Honors, Columbia College Class of 2009
Thesis: An Application of Poincaré's Fundamental Polyhedron Theorem

Publications

Predictive Modeling for Public Health: Childhood Lead Poisoning
21st ACM SIGKDD Proceedings

Why Its So Hard to Find Out Where the Candidates Stand
Washington Monthly, November 2016

Euclidean Embeddings and Riemannian Bergman Metrics
The Journal of Geometric Analysis, January 2016, Volume 26, Issue 1, pp 499-528

An Asymptotic for the Representation of Integers as Sums of Triangular Numbers
Involve 1 (2008), no. 1, p. 111-121. (with A. Atanasov, R. Bellovin, I. Loughman-Pawelko and L. Peskin)

Invited Talks

EPA Research and Development "Science at Work" Seminar
Proactive Lead Investigations, 4/12/2017
City Bureau Public Forum
Lead Poisoning Panel Speaker, 3/13/2017
American Public Health Association Annual Meeting
Predictive Analytics in Advancing Public Health Session, 11/3/2015
Bloomberg Data for Good Exchange
Predictive Modeling for Public Health: Childhood Lead Poisoning, 9/30/2015
ACM Knowledge Discovery and Data Mining (KDD) Annual Conference
Predictive Modeling for Public Health: Childhood Lead Poisoning, 8/12/2015

Grants

Collecting and Sharing Information across Sectors in Chicago and Illinois to Identify Children at Risk for Lead Poisoning. Robert Wood Johnson Foundation. With Rayid Ghani, Raed Mansour, Matthew Roberts, John DiCello, Tom Schenk, Illinois Department of Human Services, and Alliance of Chicago. Grant ID 73354. $200,000.

Volunteer

Habitat 2030 2013–Now
Chicago-area ecological habitat restoration and stewardship.

Open Source Ecology 2011–Now
Building and documenting an open source compressed earth brick press and sustainable, modular, low-cost house.

Skills

Python (numpy, scipy, pandas, sklearn, matplotlib)
SQL (PostgreSQL), Java, JavaScript (D3.js), Ruby (on Rails)
Geospatial (PostGIS, GDAL, OpenStreetMap, Mapnik, QGIS, Leaflet)
git, bash, GNU/Linux, LaTeX
Probability, Causal Inference, Differential Geometry, Partial Differential Equations
Fluent in Russian

References

- Matt Gee, mattgee@gmail.com
  Research Fellow, Urban Center for Computation and Data
- Emile Jorgensen, Emile.Jorgensen@cityofchicago.org
  Epidemiologist, Chicago Department of Public Health
- Rayid Ghani, rayid@uchicago.edu
  Research Director, Computation Institute, University of Chicago
- Steve Zelditch, s-zelditch@northwestern.edu
  Wayne and Elizabeth Jones Professor of Mathematics, Northwestern University