

Evan L. Ray

CONTACT

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EDUCATION

2015 Ph.D. Mathematics (concentration in Statistics), University of Massachusetts, Amherst
Advisor: John Staudenmayer
2012 M.S. Statistics, University of Massachusetts, Amherst
2007 B.S. Mathematics, summa cum laude, University of Massachusetts, Boston

PROFESSIONAL EXPERIENCE

2017 – present Assistant Professor of Statistics, Department of Mathematics and Statistics,
Mount Holyoke College
2015 – 2017 Postdoctoral Research Associate, Department of Biostatistics and Epidemiology,
University of Massachusetts, Amherst
2016 Visiting Lecturer, Department of Mathematics and Statistics, Amherst College
2013 – 2015 Software Engineer, Analytics, Enformia
2010 – 2013 Research Assistant, Department of Mathematics and Statistics, University of
Massachusetts, Amherst
2012 – 2013 Research Assistant, Department of Electrical and Computer Engineering, University
of Massachusetts, Amherst
2009 – 2010, 2013 Teaching Assistant, Department of Mathematics and Statistics, University of
Massachusetts, Amherst

PUBLICATIONS

Published:

Ray EL and Reich NG (2018). Prediction of infectious disease epidemics via weighted density ensembles. PLOS Computational Biology 14(2): e1005910.

Lauer, SA, Sakrejda, K, **Ray, EL**, Keegan, LT, Bi, Q, Suangtho, P, Hinjoy, S, Iamsirithaworn, S, Suthachana, S, Laosiritaworn, Y, Cummings, DAT, Lessler, J, and Reich, NG (2018). Prospective forecasts of annual dengue hemorrhagic fever incidence in Thailand, 2010 – 2014. Proceedings of the National Academy of Sciences, 0027-8424.

Ray EL, Sakrejda, K, Lauer, SA, Johansson, MA, and Reich, NG (2017). Infectious disease prediction with kernel conditional density estimation. Statistics in Medicine, 36:4908–4929.

Kozey Keadle, S, Lyden, K, Hickey, A, **Ray, EL**, Fowke, JL, Freedson, PS, and Matthews, CE (2014).

Validation of a previous day recall for measuring the location and purpose of active and sedentary behaviors compared to direct observation. *Int. J. Behav. Nutr. Phys. Act.*, 11, 12.

Submitted, Under Review, or Under Revision:

Ray, EL, Sasaki, J, Freedson, P, and Staudenmayer, J (2018). Physical Activity Classification with Dynamic, Discriminative Methods.

PROFESSIONAL SERVICE

Ad Hoc Reviews:

2018:

PLOS Neglected Tropical Diseases

2017:

PLOS Computational Biology

Statistics in Medicine

PRESENTATIONS

Ray, EL and Reich, NG (2017, November). Forecasting Infectious Disease Outbreaks with Weighted Density Ensembles. Five College Statistics and Data Science Research Bytes; Amherst, MA, USA.

Ray, EL and Reich, NG (2017, April). Feature-Weighted Ensembles for Probabilistic Time-Series Forecasts. Invited Session at New England Statistics Symposium; Storrs, CT, USA.

Ray, EL, Sakrejda, K, Lauer, SA, Johansson, MA, and Reich, NG (2016, August). Infectious disease prediction with kernel conditional density estimation and copulas. Poster session presented at Joint Statistical Meetings; Chicago, IL, USA.

Ray, EL, Sakrejda, K, Brown, AG, and Reich, NG (2016, August). Team Kernel of Truth Forecasting Method Description. Seasonal Influenza Forecasting Workshop; Atlanta, GA, USA.

Ray, EL, Sakrejda, K, and Reich, NG (2015, December). Nonparametric prediction of infectious disease incidence with state space reconstruction. Poster session presented at 5th International Conference on Infectious Disease Dynamics; Clearwater Beach, FL, USA.

Ray, EL, Sakrejda, K, Brown, AG, and Meng, X (2015, September). Team Kernel of Truth Forecasting Method Description. Workshop on Integrating Prediction and Forecasting Models for Decision-Making: Dengue Epidemic Prediction; Washington, DC, USA.

Ray, EL and Beaudry, I (2014, April). Parallel Computation with R. University of Massachusetts Statistics Seminar; Amherst, MA, USA.

Ray, EL (2012, February). Some Good Practices for R. Five College/Pioneer Valley R Users Group; Amherst, MA, USA.

Ray, EL, Krafft, P, Freedson, PS, and Staudenmayer, J (2011, May). Novel analytic methods to estimate physical activity from accelerometer data: an open-source web-based tool. Poster session presented at 2nd International Congress on Ambulatory Monitoring of Physical Activity and Movement; Glasgow, Scotland.

HONORS and AWARDS

- 2015 Scholarship, 7th Summer Institute in Statistics and Modeling in Infectious Diseases
- 2013 Honorable Mention, University of Massachusetts Institute for Computational Biology, Biostatistics, and Bioinformatics Open Source Software Innovation competition. Granted for a website allowing users to apply statistical methods for objective measurement of physical activity and the WebDevelopR R package.

VOLUNTEER EXPERIENCE

- 2016 Volunteer Statistical Consultant, Statistics Without Borders

PROFESSIONAL AFFILIATIONS

American Statistical Association