

AARON MAURER

Statistics Department Applicant

Fall, 2014

SUMMARY

Quantitative researcher with a zeal for using statistical and econometric modeling to answer hard questions with big data. Looking for difficult problems to solve through thorough and thoughtful analysis.

Specialties: Regression Analysis, Statistics, Econometric Models, Graph Theory, Microsimulation, Statistical Programming

EXPERIENCE

Acumen, LLC

Data and Policy Analyst

Burlingame, CA

August 2011 - Present

Worked closely with various federal agencies answering empirical questions using healthcare data.

- Performed data mining on large Medicare and Medicaid data sets.
- Built statistical and econometric models.
- Developed statistical graphics to visualize trends in data.
- Worked with clients to include subject specific knowledge into analysis and explicate results.
- Selected Projects include:
 - ◇ *Market and Enrollment Projections of the Affordable Care Act*
 - Developed microsimulation model that calculated affects of the law on a person level basis.
 - Employed multiple regression models to impute insurance takeup in novel circumstances.
 - Predictions used to dictate spending of \$25 billion federal program.
 - ◇ *Flu Vaccine Comparative Effectiveness*
 - Carefully designed a test and control sample to mitigate exogenous confounding factors.
 - Implemented and tested several regression models to measure effectiveness while controlling for other independent factors, varying hazard, and mis-measurement of outcome.
 - Results and novel approach in process of publication.
 - ◇ *Financial Projections of Policy Reform*
 - Projected budget impact of Bipartisan Policy Center Medicare reform program.
 - Developed model for beneficiary level expenditures under numerous policy changes.
 - Bottom line estimates included in final report on the Domenici-Rivlin Plan
 - ◇ *Active Surveillance of Flu Vaccine Safety*
 - Tracked approximately 15 million yearly vaccinations in Medicare population.
 - Provided FDA with an estimate of post vaccination hazard of Guillain-Barre syndrome.
 - Employed sequential probability test to signal when hazzard above historical levels.

The Institute for Mathematics and its Applications

Undergraduate Researcher

Minneapolis, MN

June 2010 - July 2010

Researched outstanding graph theoretic problems under mathematics and computer science professors.

- Proved novel results about pursuit evasion games.
 - ◊ Gave talk on work at the Joint Mathematics Meeting.
- Helped program algorithm to classify graphs with respect to games of cops and robbers.

Carleton College

Mathematics Department Assistant System Administrator

Northfield, MN

June 2009 - June 2011

Helped administer computer systems and labs for the mathematics and computer science departments.

- Helped maintain Windows, Mac, and Linux machines.

Mathematics Skill Center Tutor

March 2009 - June 2009

Assisted other students with mathematical skills and homework sets.

- Tutored Calculus, Linear Algebra, Probability, and Statistics

EDUCATION

Carleton College - Northfield, Minnesota

June 2011

B.A. in Mathematics & History, Cum Laude

Distinction in the Math Major

Sigma Xi

Varsity Football and Track & Field

ANALYTIC AND PROGRAMMING SKILLS

Statistical Packages

Stata, SAS, R, S-PLUS

Programing Languages

Python, SQL, Visual Basic, \LaTeX

Operating Systems

Windows, Linux, Mac OS

Mathematical Areas

Combinatorics, Graph Theory, Probability

Statistical Methods

Regression Analysis, Monte Carlo Simulation, Maximum Likelihood

PUBLICATIONS

- W. Baird, A. Beveridge, A. Bonato, P. Codenotti, J. MacCauley, A. Maurer, S. Valeva, *On the minimal order of k -cop-win graphs*, submitted to Contributions to Discrete Mathematics

TALKS

- A. Maurer, J. MacCauley, S. Valeva, *Cops and Robbers on Planar Graphs*, 2011 Joint Mathematics Meeting, New Orleans, LA (January 2011)
- H. Izurieta, N. Thadani, Y. Lu, R. Franks, T. MaCurdy, D. Pratt, A. Maurer, C. Worrall, H. Hong, J. Kelman, *Comparative effectiveness of high- versus standard-dose influenza vaccines among US residents aged 65 years and older: Preliminary results*, 7th Vaccine & IVS Congress, Barcelona, Spain (October 2013)