Carson Sievert

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Education

- Ph.D. in Statistics, Iowa State University (Spring 2017)
  - **Thesis**: Interfacing R with Web Technologies for Interactive Statistical Graphics and Computing with Data (preprint)
- M.S. in Statistics, Iowa State University (May 2013)
  - **Thesis:** Tools for Collecting and Analyzing MLB PITCHf/x Data (slides)
- Double B.A. in Mathematics & Economics, Saint John's University (May 2010)

Experience

Software Developer, plotly. May 2015 - Present

- Maintainer and lead developer of plotly's open-source R package. I also wrote an online & interactive book explaining the project.

Research Assistant, Monash University. September 2015 - May 2016

- Advise honours student research and present workshops on data science in R.

Lecturer/TA, Iowa State University. Aug. 2011 - May 2015

- Instructor for the online version of 'Intro to Business Statistics' (since Summer 2014).
- Course instructor for Intro to Business Statistics. (Since Fall 2012)
- Teaching Assistant for Statistical Methods for Research Workers. (Summer 2012)
- Grading supervisor for Intro to Business Statistics. (Fall 2011 & Spring 2012)

Software Developer, Google Summer of Code. Summer 2014 & 2015

- Served as a student in summer 2014 and a mentor in summer 2015 for **animint**; an R package for creating web-based interactive graphics and animations using ggplot2's grammar of graphics implementation.

Research Intern, Statistics Research Department at AT&T Labs. Summer 2013

- Authored the R package **LDAvis** with Kenny Shirley.

Data Analyst, Hardwick-Day Inc. Nov. 2010 - Nov. 2011

- Developed an algorithm for the company's web-based Net Price Calculators (projected to generate over $3M in new revenue over five years).

Publications

Book Chapters

- Carson Sievert and Brian Mills (2017). "Using Publicly Available Baseball Data to Measure and Evaluate Pitching Performance" in Handbook of Statistical Methods and Analyses in Sports, edited by Jim Albert, Mark E. Glickman, Tim B. Swartz, and Ruud H. Koning. Chapman & Hall/CRC. ISBN 9781498737364. (preprint)

Journal Articles

- Carson Sievert (2014). Taming PITCHf/x Data with pitchRx and XML2R. The R Journal. 6(1).

Workshop Papers

- Carson Sievert and Kenny Shirley (2014). LDAvis: A Method for Visualizing and Interpreting Topics. Workshop on Interactive Language Learning, Visualization, and Interfaces at the Association for Computational Linguistics. Baltimore, Maryland, 2014.

Manuscripts

- Carson Sievert (2016). plotly for R.
- Carson Sievert (2016). Interactive data visualization on the web using R.
- Carson Sievert, Toby Dylan Hocking, and Susan VanderPlas (2015). Animint: A Grammar for Interactive Animations

Talks

All talks given in 2016 (and beyond) are listed here – http://cpsievert.github.io/talks/

Invited

- Dynamic Interactive Web Graphics for Data Analysis (slides). Murdoch Childrens Research Institute. Melbourne, Australia. December, 2015
- Interactive and Dynamic Web-Based Statistical Graphics (slides). Walter and Eliza Hall Institute for Medical Research. Melbourne, Australia. September, 2015
- Acquiring, Visualizing, and Modeling MLB Umpire Strike/Ball Decisions with PITCHf/x Data (slides). Joint Statistical Meetings. Seattle, WA. August, 2015
- Recent Advances in Interactive Graphics for Data Analysis (slides). Joint Statistical Meetings. Seattle, WA. August, 2015
- Web Scraping in R (slides). Great Plain R Users Group, Sioux Falls, SD. June, 2015

Selected

- Reproducible web documents with R, knitr & Markdown, ISU Graphics Working Group (slides). November, 2013.
- LDAVis: A Method for Visualizing and Interpreting Topics (slides). Joint Statistical Meetings. Boston, Massachusettes. August, 2014.
- An interactive visualization platform for interpreting topic models (slides and video). ISU Graphics Working Group. August, 2013.
- pitchRx: Tools for Collecting and Analyzing Major League Baseball PITCHf/x Data (slides). Joint Statistical Meetings. Montreal, Canada. August, 2013.
- Play for Pay: the Effects of 'Walk Year' Performance on MLB Free Agent Contracts, Scholarship Day. St. Joseph, MN. 04/2010.
- A Mathematical Perspective of Voting, Pi Mu Epsilon's National Conference at MathFest. Portland, OR. 08/2009.
- An Application of Auction Theory to the MLB Free Agent Market, with Zhishan Guo. Mathematical Association of America's MathFest. Madison, WI. 08/2008.

Honors/Awards

- Invited participant of 2016 rOpenSci Unconference Australia.
- Awarded first place in the 2014 statistical graphics video competition for this submission.
- Invited participant of the 2014 rOpenSci hackathon (see my blog post)

- Invited member of the National Mathematics Honor Society - Pi Mu Epsilon
- Invited member of the Economics Honor Society - Omicron Kappa Sigma
- President's scholar and Dean's List recipient