Susan VanderPlas

802 17th St, Auburn, NE 68305
(515) 509-6613
srvanderplas@gmail.com
www.srvanderplas.github.io

Skills and Strengths

Statistical modeling to make predictions and decisions based on available information

Risk assessment, using data to understand probable outcomes, assess market changes, and identify opportunities

Optimization Identifying targets for process improvement and sources of variability

Communicating and summarizing information with written reports and well-designed graphics

Education

2011-2015* **Ph.D. in Statistics**
Perception & Statistical Graphics
Iowa State University

2009-2011 **M.S. in Statistics**
Iowa State University

2005-2009 **B.S. in Psychology and Applied Mathematical Sciences**
Texas A&M University

Technical Skills

Statistical Techniques Linear, generalized, mixed, and hierarchical models. Data mining, Bayesian, time series, and nonparametric analysis.

Statistical Software Expert R user, SAS (linear and mixed models), JMP.

Programming and Database Software C and C++, JavaScript, git, SQL and MySQL.

Web Development Interactive applet development with Shiny, d3 interactive graphics, use of knitr and pandoc to automate report generation, Apache web server administration.

Computer Skills Proficient in Microsoft Office. Familiar with Windows and Linux.

Awards

ASA Student Paper Award (Graphics) • 2013

NSF IGERT Fellowship • 2009-2011

Texas A&M • Foundation, University, Liberal Arts, Psychology, and Mathematics Honors

University Scholar • Texas A&M, 2006-2009

Experience

Statistical Visualization

Ph.D. Research, ISU Summer 2012-Present
Modeled effectiveness of graphical designs for accurate communication of statistical results.

Soybean Genome Analysis

USDA and ISU Statistics Fall 2013-Present
Identified important features of soybean genetic data, including genes which contribute to disease resistance and increased yield.

Statistical Consulting

Nebraska Public Power Fall 2012-Present
Accurately predicted the number of maintenance outages that occurred during the first 24-month cycle using 18-month cycle data. Assembled a database of power prices from several regions to examine the financial impact of maintenance scheduling and explore the conditions leading to negative power prices.

R Course Instructor Spring 2013-Present

Designed and conducted workshops to teach R skills to members of the university and local business community.

Statistics Education Applets 2013-2014

Created web-based applets to teach statistical techniques interactively. Link: Applets

Google Summer of Code

Summer 2013-14
Worked to develop the `animint` package for R to translate R graphics into d3 interactive JavaScript graphics. Participated in the project in 2013, and returned to serve as a mentor for the project in 2014.

Modeling Collisions and Road Design

Iowa DOT and ISU Statistics Jan-Aug 2012
Modeled effectiveness of road interventions on traffic accidents and fatalities.

Nonparametric Peak Identification

MS Research, ISU 2010-2011
Worked with the materials science and engineering department at ISU to develop and implement nonparametric methods for peak detection in mass spectroscopy data. Helped to fit systems of differential equations to spectroscopy data in order to extract additional information about the atomic structure of the material.