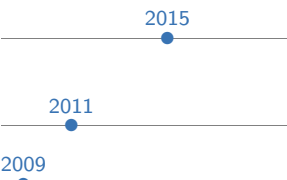


# Susan Vanderplas

## Curriculum Vitae

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🌐 [svanderplas](http://svanderplas.com)

### Education

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- 2015 **PhD, Statistics**, Iowa State University.  
Dissertation: The Perception of Statistical Graphics
- 2011 **MS, Statistics**, Iowa State University.
- 2009 **BS, Psychology, Applied Mathematical Sciences**, Texas A&M University.

### Professional Experience

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- 2018 **Research Assistant Professor**, *Center for Statistics and Applications in Forensic Evidence*, Iowa State University.
- 2015–2018 **Statistical Analyst**, *Nebraska Public Power District*.
- 2015 **Postdoc**, *Iowa State University Office of the Vice President for Research*.
- 2014 **Consultant**.  
Develop web applications, interactive data displays, and statistical analyses for clients including the Iowa Soybean Association, ISU Agronomy Labs, and the USDA.

### Scholarship

#### Publications

Percentages estimated from git contributions using git fame

- 2018 **Susan Vanderplas**, Ryan Goluch, and Heike Hofmann. Framed! Reproducing 150 year old plots. *Journal of Computational and Graphical Statistics*, 2018  
Programming and analysis (60%), writing (50%).
- C Sievert, J Cai, **S Vanderplas**, F Khan, K Ferris, and T Hocking. Extending ggplot2 for linked and dynamic web graphics. *Journal of Computational and Graphical Statistics*, 2018
- 2017 **Susan Vanderplas** and Heike Hofmann. Clusters beat Trend!? Testing feature hierarchy in statistical graphics. *Journal of Computational and Graphical Statistics*, 26(2):231–242, 2017  
Programming and analysis (90%), writing (50%).
- Lindsay Rutter, **Susan Vanderplas**, Dianne Cook, and Michelle Graham. ggeanealogy: An R Package for Visualizing Genealogical Data. *Journal of Statistical Software*, 2017

Heike Hofmann and **Susan Vanderplas**. All of this has happened before. All of this will happen again: Data Science. *Journal of Computational and Graphical Statistics*, 26(4):775–778, 2017

2016 **Susan Vanderplas** and Heike Hofmann. Spatial reasoning and data displays. *IEEE Transactions on Visualization and Computer Graphics*, 2016

Programming and analysis (90%), writing (75%).

2015 **Susan Vanderplas** and Heike Hofmann. Signs of the sine illusion - why we need to care. *Journal of Computational and Graphical Statistics*, 24(4):1170–1190, 2015

Programming and analysis (50%), writing (60%).

In Progress **Visual Inference for Bayesians** Examine two-target statistical lineups and the connection to Bayes Factors.

**Truthiness and Statistical Charts** Evaluate whether the truthiness effect (increased belief in a statement based on the presence of an accompanying picture) holds for statistical charts and maps.

**Longitudinal Shoe Database** Design a database for sharing longitudinal shoe wear data, including powder prints, 2D scans, 3D scans, pictures, and crime-scene style casts and prints.

**Bullet Signature Resampling** Method for resampling bullet signatures used to calculate match and non-match score distributions.

**Bullet Test Set Validation** Validate an algorithm for bullet matching on several test sets used to test forensic examiner proficiency.

**Continuous Integration and Unit Testing in Forensics Software** Discussion of best practices for development of forensics software (continuous integration, unit testing, version control systems, and open-source licensing).

**Footwear Class Characteristic Recognition using Neural Networks** Use convolutional neural networks to automate identification of class characteristics in images of footwear outsoles.

## Invited Talks

2019

**Statistical Lineups for Bayesians**, *JSM*.

2018

**Clusters Beat Trend!? Testing Feature Hierarchy in Statistical Graphics**, *SDSS*.

2015

**Animint: Interactive Web-Based Animations Using Ggplot2's Grammar of Graphics**, *JSM*.

2014

**The curse of three dimensions: Why your brain is lying to you**, *JSM*.

## Contributed Talks

2018

**Framed! Reproducing 150 year old charts**, *JSM*.

2017

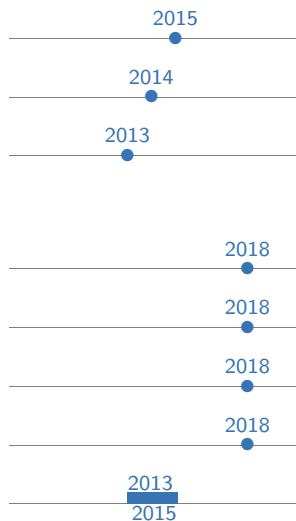
**A Bayesian Approach to Visual Inference**, *JSM*.

2016

**Clusters Beat Trend!? Testing Feature Hierarchy in Statistical Graphics**, *JSM*.

2015

**Visual Aptitude and Statistical Graphics**, *InfoVis*.

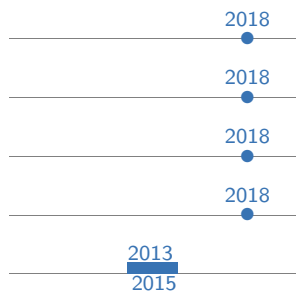


**Animint: Interactive, Web-Ready Graphics with R**, *Great Plains R User Group*.

**Do You See What I See? Using Shiny for User Testing**, *JSM*.

**Signs of the Sine Illusion – why we need to care**, *JSM*.

## Software



**bulletsamplr**, *Resampling of bullet signatures*.

**ImageAlignR**, *Image registration algorithms for forensics*.

**bulletxtctr**, *automated matching of 3d bullet scans*.

**x3ptools**, *Reading, manipulating, and visualizing x3p files*.

**animint**, *animated, interactive web graphics for R using d3.js*.

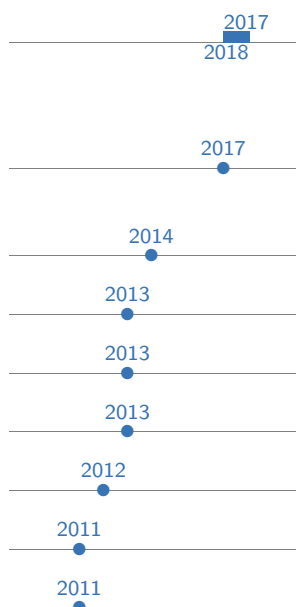
## Awards and Honors



**NIJ R&D in Forensic Science**, *Statistical Infrastructure for the Use of Error Rate Studies in the Interpretation of Forensic Evidence*, Collaborator.

**ASA Section on Statistical Graphics**, *Student Paper Award*.

## Teaching



**Business Intelligence Embedded Agent Program**, *Nebraska Public Power District*.

**R Workshop**, *Nebraska Public Power District*.

**R Workshops**, *Iowa State*.

**R Workshops**, *Iowa State*.

**Statistical Methods for Research**, *Iowa State*, Teaching Assistant.

**Introduction to Business Statistics II**, *Iowa State*, Teaching Assistant.

**Introduction to Business Statistics II**, *Iowa State*, Teaching Assistant.

**Statistical Methods for Research**, *Iowa State*, Teaching Assistant.

**Empirical Methods for Comp. Sci.**, *Iowa State*, Teaching Assistant.

## Mentoring and Advising



**Miranda Tilton**, *Statistics*, MS Project.

Footwear Class Characteristics and Computer Vision

**Talen Fisher**, *Computer Engineering*, Undergraduate Research.

Tools for working with x3p files, database design for storing bullet scans and intermediate analysis products.

2018

**Ben Wonderlin and Jenny Kim**, *Young Engineers and Scientists*, Summer 2018.  
Footwear Class Characteristics and Computer Vision

## Service

2017  
2019

**Graphics Section Representative to the Council of Sections, ASA.**