

Nicholas S. Berry

Ph.D. Candidate at Iowa State University
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<https://berryni.github.io>

Education

- Iowa State University** Ames, IA
Ph.D. Statistics (exp. 2018) & M.S. Statistics (earned 2016) 2013 - 2018
 - Research in unsupervised learning, especially clustering, as well as graphical models, including Dynamic Bayesian Networks and Gaussian Graphical Models.
 - Committee: Prof. Ranjan Maitra (advisor), Prof. Alicia Carriquiry, Prof. Dan Nettleton, Prof. Vivekananda Roy, Prof. William Meeker
- Texas A&M University** College Station, TX
B.S. Applied Mathematics, emphasis in Statistics 2009 - 2013

Research Experience

- Iowa State University** Ames, IA
Center for Statistics and Applications in Forensic Evidence Fall 2017 - Curr.
 - Automatic Forensic Analysis of Handwriting and Questioned Documents
 - <https://github.com/CSAFE-ISU/handwriter>
- MD Anderson Cancer Center** Houston, TX
Graduate Researcher under Drs. Min Jin Ha and Kim-Ahn Do Summer 2017
 - Created pipeline for analysis of underlying graph structures for microbiome data
 - Estimation and differential network analysis for sub-group specific microbiome data
- Iowa State University** Ames, IA
Graduate Researcher under Dr. George Amariuca Fall 2015 - Spring 2017
 - Continuous Biometric Authentication via Dynamic Bayesian Networks
 - Eliminating positive feedback for connected authenticating devices

Teaching Experience

- Instructor** Iowa State University Ames, IA
 - Stat 104: (Introduction to Statistics): Fall 2014, Spring 2015, Fall 2015
- Co-Instructor** Iowa State University Ames, IA
 - Stat 444: (Bayesian Data Analysis): Spring 2018

- **Grader / Lab Instructor**

Iowa State University
Ames, IA

- Stat 401 (Stat. Methods for Research): Summer 2015
- Stat 101 (Principles of Statistics): Fall 2013, Spring 2014, Summer 2014

Skills

- **Statistics**

- Advanced statistical methods, including spatial, time series, advanced likelihood topics, and Bayesian inference
- Statistical Computing (in R & C) – Advanced MCMC methods, clustering algorithms, EM, Bootstrap/Jackknife
- Measure & Probability Theory

- **Programming/Software**

- Fluent in R, C, C++, and Python
- Extensive use of Java and SAS
- Broad understanding of data structures and algorithms
- Proficient with L^AT_EX, the tidyverse, git, and dynamic document creation

- Strong public speaking skills

- I am science literate, allowing me to work seamlessly on applications across many different areas

Presentations

- **Graphics Working Group**

Iowa State University
March 2018

- Information Extraction for Handwritten Text

- **Joint Statistical Meetings**

Baltimore, MD
August 2017

- Variable Selection in K-means Clustering

- **Digital Forensics Workshop**

Washington D.C.
May 2017

- Continuous Biometric Authentication and Sequential Updating of Beliefs

- **Statistical Learning Working Group**

Iowa State University
October 2016

- Continuous Authentication in Challenging Environments via Dynamic Bayesian Networks

Awards

- Graduate Teaching Award

Iowa State University
April 2016

Other Projects

- *International Champions Cup Ticket Sales* *Summer 2014*
 - Consulted on a project to model and predict final ticket sales for soccer games in US based on data from previous year
 - Made accurate predictions, despite those predictions being different than anticipated by the hiring company