# Michael Bostwick

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## EDUCATION

**MS, Statistics & Operations Research**
*University of North Carolina at Chapel Hill*
May 2018
*Machine Learning Concentration*

**BS, Statistics**
*University of Connecticut*
May 2010
*Business Minor*

## SKILLS

Machine Learning

Text Mining

Optimization

Algorithms

Time Series Analysis

Linear Models

Survey Statistics

## TOOLS

Python (Pandas, Scikit-learn)

Theano

R (tidyverse, ggplot2)

SAS

SQL

AMPL

Bash

## EXPERIENCE

### DATA SCIENCE INTERN
Spreedly, June 2017 – July 2017
- Built lead scoring model for financial technology startup, prioritizing prospective customers and providing insights into subscription behavior
- Worked the problem from end to end, including: defining business considerations, cleaning messy data with Pandas, creating machine learning models in Scikit-learn, performing error analysis, and communicating results in company-wide presentation

### STATISTICIAN
RTI International, September 2014 – August 2016
- Developed statistical programming in SAS to process, weight and analyze survey data for clients including the Centers for Disease Control, the Department of Education and the Department of Justice
- Selected to present findings at the American Association of Public Opinion Research Annual Conference, furthering research on mobile surveys

### IT RESEARCH & STRATEGY ANALYST
Navy Federal Credit Union, May 2013 – August 2014
- Performed data analysis to identify trends and outliers in the performance of IT project portfolio, resulting in more effective resource utilization and process improvements
- Provided research and analysis of trends at the intersection of banking and technology directly to the Chief Technology Officer and senior IT leadership team to inform strategic and tactical initiatives

### DATA ANALYST/CAMPUS STAFF
CRU, May 2010 – August 2012
- Led initiatives to support evidence based decision making for non-profit organization, informing national leadership decisions through accessible presentation of data-based findings
- Pioneered new movements on three campuses in Buffalo, increasing the number of students involved from 2 to 35 in a single year

## PROJECTS

### Learning to Rank for Call Center Queue Optimization
- Compared the performance of predicting shortest customer service time using a pointwise regression model and a listwise Neural Network ranking model optimized with Theano

### Supervised Topic Modeling for Health Score Predictions
- Extracted topics from restaurant reviews predictive of inspection violations using Supervised Latent Dirichlet Allocation

### Recommender System for Yelp Restaurants
- Used text mining techniques on Yelp reviews to implement custom K-Nearest Neighbor recommendation algorithm in R