## **EDUCATION** M.S. in Engineering, Duke University, GPA: 3.80 2017 Advisor: Dr. Nimmi Ramanujam (BME), Dr. Larry Carin (ECE) B.Sc. in Biomedical Engineering, NC State University, GPA: 3.94 2014 Bioinstrumentation Concentration. Minor in Piano Performance. WORK Senior Data Scientist, Automated Insights 2018 - Pres 2017 - 2018 **EXPERIENCE** Data Scientist, Automated Insights Adapting and implementing machine/deep learning solutions to improve the generation of personalized content from data in the Wordsmith web app. • Programmed and deployed a contextual synonym suggester for Wordsmith Extended Wordsmith to recommend dynamic insights within BI dashboards **PROJECTS** Deep Learning for Threat Detection, Duke University, Dr. Larry Carin 2016 - 2017 Created a semi-supervised, multi-view region-based CNN algorithm for threat detection in x-ray scans of airplane luggage using Python and TensorFlow. • First implementation of handgun detection in x-ray images, will deploy in 2019.

Diagnostic Cancer Imaging, Duke University, Dr. Nimmi Ramanujam 2014 - 2016

- Designed a multispectral imaging system to predict malignancy of breast cancer margins. Analysis and Monte-Carlo ray tracing in Matlab and Python.
- Achieved an AUC of 0.72 with a random forest implementation.

## **TECHNICAL SKILLS**

Programming Languages: Python (sklearn, TensorFlow, PyTorch, pymc3), Javascript (Node.js, React.js), R (glm, ggplot2)

Software Frameworks: Version Control (Git), Containers (Docker), Databases (PostgreSQL, DynamoDB), BI Platforms (Tableau, Microstrategy)

Machine Learning: Neural networks (CNNs, LSTMs), optimization, clustering, recommenders, tree-based methods, reinforcement learning

Statistical Methods: Hierarchical Bayesian inference, time series analysis, dimensionality reduction, matrix factorization, multivariate analysis

OUTREACH	High School Tutor, Student U, Durham, NC.	2015 - Pres
	FIRST Lego Robotics Coach, Student U, Durham, NC.	2014 - 2015
	Engineering Ambassador, NC State University.	2011 - 2013

## **HONORS**

NSF GRFP Honorable Mention (2016), James B. Duke Fellowship (2014), NC State Goldwater Nomination (2013), NC State Caldwell Fellow (2010)