

# Christina Bogdan

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## EDUCATION

### New York University, New York, NY

#### Master of Science (MS) in Data Science

Sep 2015 – May 2017

- Courses: Machine Learning, Deep Learning, Statistical and Mathematical Methods for Data Science, Fundamental Algorithms, Natural Language Understanding with Deep Learning, Big Data, Inference and Representation, Monte Carlo Methods, Causal Inference, Advanced Machine Learning

#### Bachelor of Arts (BA) in Mathematics

Sep 2013 – May 2015

- Courses: Honors Linear Algebra (Graduate), Basic Probability (Graduate), Data Structures, Mathematical Modeling, Mathematical Statistics, Theory of Probability

### Binghamton University, Binghamton, NY

#### Bachelor of Arts (BA) in Mathematics

Aug 2011 – May 2013 (transferred)

- Courses: Calculus I-III, Linear Algebra

## PROFESSIONAL EXPERIENCE

### NYU Department of Environmental Studies, New York, NY

#### Research Assistant

Oct 2016 – Present

- Applied convolutional neural networks to identify wildlife trade from online retailers using image and text data
- Improved models by creating Word2Vec embeddings using large amounts of unlabeled data
- Built end to end model to scrape and clean data, classify different properties of items, and store results using Python, TensorFlow
- Set up and maintain a MongoDB database of potential wildlife trade and model results

### Knewton, New York, NY

#### Data Science Intern

Jun 2016 – Sep 2016

- Designed and implemented methods for diagnosing skill levels of new students with multi-armed bandit approaches in Java
- Formulated metrics to evaluate these policies and ran simulations of students to assess different approaches
- Investigated quality of student simulations and suggested improvements
- Implemented Bayesian optimization algorithm in Python for quickly optimizing parameters of recommender to automate QA using simulations

### The Weather Company, New York, NY

#### Part-Time Data Analyst

May 2014 – May 2016

- Automated daily ETL process to integrate data from multiple sources and load in Amazon Redshift using Python
- Held a series of seminars instructing team members on using Python for data analysis
- Created dashboards in Tableau and QlikView summarizing advertising trends

## PROJECTS

### Visualizing Twitter Networks of the 2014 Ukraine Crisis, MS in Data Science, NYU

Fall 2016

- Created general heuristic to restructure and reduce large retweet network while preserving information
- Designed interactive visualization in D3.js tracking crisis over 95 days
- Won 'Best Data Visualization' at the NYU Center for Data Science Academy Awards

### Question-Answering Using Deep Learning, MS in Data Science, NYU

Fall 2016

- Implemented model (<https://arxiv.org/abs/1606.02858>) for question answering in TensorFlow
- Experimented with model architecture using different methods of embedding and attention

### Parsing Images of Characters Using MCMC, MS in Data Science, NYU

Fall 2016

- Applied Markov Chain Monte-Carlo methods to improve inference process for parsing images of hand-drawn characters into strokes

## LANGUAGES & TOOLS

Python (advanced), SQL (advanced), Java (intermediate), Javascript (intermediate), MATLAB (intermediate), Lua (novice), R (novice), LaTeX, Vim, AWS, Git, Pandas, TensorFlow, scikit-learn, Torch, D3.js, MongoDB

## OPERATING SYSTEMS

Fedora, OS X, Windows