

# DANIEL ZEIBERG

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## EDUCATION

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### PhD in Computer Science

Northeastern University, Boston, MA

*Relevant Courses:* Advanced Machine Learning, Statistical Inference, Data Visualization

2018 - Present

GPA: 4.0/4.0

### Bachelor of Science in Engineering, Computer Science

University of Michigan, Ann Arbor, MI

Minor in Statistics

Graduated summa cum laude from Engineering Honors College

*Relevant Courses:* Machine Learning, Artificial Intelligence, Natural Language Processing, Theoretical Statistics, Applied Regression

2014 - 2018

GPA: 3.83/4.0

## EXPERIENCE

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### Graduate Research Assistant

*Northeastern University, Advised by Predrag Radivojac*

January 2019 - Present

*Boston, MA*

- Developed a deep learning model for class prior estimation for positive-unlabeled data using Tensorflow
- Researching heterogeneous graph-based models for compound protein interaction prediction using Keras
- Leveraged computer clusters and parallelism to quickly process large high-dimensional datasets

### Advanced Machine Learning Course Project

*Northeastern University*

January - May 2019

*Boston, MA*

- Evaluated the utility of natural language processing techniques in lyric-based song genre prediction
- Compared state of the art neural topic models to Word2Vec and TF-IDF in learning song representations

### Graduate Research Assistant

*Northeastern University, Advised by Rose Yu*

September - December 2018

*Boston, MA*

- Developed deep sequence-to-sequence models using Pytorch that forecast spatiotemporal data
- Achieved prediction accuracy on-par with published methods for next hour traffic speed forecasting

### Undergraduate Research Assistant

*University of Michigan, Advised by Jenna Wiens*

May 2017 - July 2018

*Ann Arbor, MI*

- Developed a model that uses electronic health records to risk stratify hospital patients for Acute Respiratory Distress Syndrome
- Demonstrated our model's ability to allow doctors to avoid time intensive manual chart review

## PUBLICATIONS, AWARDS AND PRESENTATIONS

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- Zeiberg et al. (2020) Fast Nonparametric Estimation of Class Proportions in the Positive-Unlabeled Classification Setting. AAAI-2020
- Zeiberg, Prahlad et al. (2019) Machine learning for patient risk stratification for acute respiratory distress syndrome. PLOS ONE 14(3): e0214465. <https://doi.org/10.1371/journal.pone.0214465>
- Most Likely To Have Transformative Scientific Impact Award - MIDAS Symposium October 2017
- Michigan Center for Health Analytics and Medical Prediction, invited speaker October 2017

## TECHNICAL STRENGTHS

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### Computer Languages

Python, C/C++, MATLAB, R, Java

### Software & Tools

Tensorflow, Pytorch, Keras