Oliver Spohngellert

spohngellert.o@husky.neu.edu | (917) 750 1162 | github.com/spohngellert-o | oliverspohngellert.com

Education

Northeastern University Boston, MA

Candidate for Master of Science in Data Science September 2019-May 2021

GPA: 3.5/4.0 | **Curriculum Highlights**: Introduction to Data Management and Processing, Algorithms

Northeastern University Boston, MA

Bachelor of Science in Computer Science, Minor in Mathematics September 2014-May 2019

GPA: 3.73/4.0 | **Honors/Awards**: Dean's List, Dean's Scholarship, Northeastern Code Showdown 2nd Place

Curriculum Highlights: Supervised Machine Learning, Large Scale Information Storage and Retrieval, Differential Equations and Linear Algebra, Probability and Statistics

Technical Skills

Programming: Python, R, Scala, Java, pandas, numpy, Keras, caffe, matplotlib, tidyverse, ggplot2

Knowledge of: Deep/Machine Learning, Functional Programming, NoSQL Databases, SQL, git

Professional Experience

Northeastern University Network and Distributed Systems Security Lab Boston, MA

Research Assistant January 2019-Present

- Researched designing user classification models using data extracted from IoT network traffic. Designed several ML algorithms, including Long Short Term Memory (LSTM) and Feed-Forward Neural Networks.
- Explored using unsupervised learning for detecting self-propagating malware funded by DARPA. Engineered features and trained Kernel Density Estimation and Isolation Forest anomaly detection system.
- Investigated supervised classification of malicious messages between self driving cars. Processed 50 GB of messages in a simulated vehicle traffic dataset and trained LSTM models at above 90% accuracy.

Netra Boston, MA

Deep Learning/Machine Learning Co-op January 2018-July 2018

- Rewrote code to decrease training time for object detection system by 50% (2 weeks).
- Trained logo detection model using transfer learning, increasing number of recognized classes by 500.
- Researched NLP approaches for content safety in videos, including FastText and Word2Vec models.

Intuit San Diego, CA

Software Engineer Co-op January 2017-July 2017

- Designed and implemented data pipelines storing data for every TurboTax user.
- Collaborated in a team of six to win People's Choice Award in Intuit's internal hackathon.

Projects/Publications

The House That Knows You (Under Submission): Extracted data from IoT network traffic logs to classify who is using the IoT devices, with top overall F1 score of 0.86. https://arxiv.org/abs/1908.00592

Genre Classification: Scraped lyric data to create classifiers for the genre of a song given its lyrics. Trained multiple classifiers with top accuracies reaching 76%. https://github.com/spohngellert-o/genre_classification