

Samar Dikshit

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EDUCATION

Northeastern University, Boston, MA September 2019 – Present
Khoury College of Computer Sciences Expected Graduation: December 2021
Candidate for Master of Science in Data Science, GPA: 3.78
Related courses: Data Management and Processing, Machine Learning, Information Retrieval, Algorithms
Manipal Institute of Technology, Manipal, India July 2015 – July 2019
Department of Information and Communication Technology
Bachelor of Technology in Computer and Communication Engineering (Data Analytics minor)

TECHNICAL KNOWLEDGE

Programming Languages:	Python 3, R, C++, Cypher, SQL
Data Science Technologies:	NLTK, TextBlob, Jupyter, Matplotlib, NetworkX, NumPy, pandas, PyTorch, scikit-learn, Seaborn, Rasa, caret, tidyverse, Neo4j, MySQL, Elasticsearch, Git
Certifications:	Querying with Cypher in Neo4j 4.x, Data-driven Astronomy
Operating Systems:	Windows, Ubuntu

EXPERIENCE

Analytics Engineering Intern January 2021 – Present
DTonomy Inc., Cambridge, MA

- Analyzing cyberattack data in Python based on the MITRE ATT&CK database to create an algorithm and API to generate a graph of attack patterns for the SOAR platform
- Creating bots on Slack using Rasa 2 to use services like Google Analytics and AbuseIPDB
- Developing Elastic Security integrations for the SOAR platform using Node-RED

Research Assistant June 2020 – January 2021
Center for Complex Network Research, Northeastern University, Boston, MA

- Collected, processed, and explored data with over 1.5 million samples related to philanthropies, non-profits, and universities from the LittleSis API using Python
- Worked on matching the names of organizations and people across the new data and previous GuideStar data using TfidfVectorizer, CountVectorizer, and pairwise kernels, thereby expanding the previous network
- Created and analysed a new network with more than 97,000 relationships between sociopolitical entities to determine factors that influence grants and donations using NetworkX and pandas

Teaching Assistant May 2020 – December 2020
Northeastern University, Boston, MA

- DS2000 Programming with Data, CS3000 Algorithms and Data

PROJECTS

Detecting Brain Tumours using Machine Learning October 2020 – December 2020

- Trained a set of classifiers to detect a brain tumour when given an MRI scan in Python
- Used decision trees, adaptive boosting, and a convolutional neural network to obtain a peak sensitivity and accuracy of 98.27% and 99.17% with cross-validation, hyperparameter tuning, and feature selection

World War II Information Retrieval February 2020 – April 2020

- Built a Python web scraper to collect over 90,000 documents related to World War II, processed the text using NLTK, and stored them in an Elasticsearch index
- Implemented PageRank and HITS to calculate relevance scores for the documents for a given set of queries

Similarities and Differences between News Sources in the United States October 2019 – November 2019

- Scraped over 72,000 news articles from 8 news sites and used R to create visualizations illustrating bigrams, word associations, and sentiment to prove the existence of media bias depending on political lean
- Developed Fasttext and SVM models with a peak sensitivity and specificity of 92.86% and 92.54% respectively to classify articles by political lean based on their headlines

More projects can be found [here](#).