

Shruti Bendale

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SUMMARY

MS in CS graduate offering a strong foundation in data analysis and programming across multiple platforms. Experienced in machine learning & deep learning techniques, data management and analysis, distributed data storage systems, web application development.

EDUCATION

University at Buffalo, State University of New York, NY

Aug. 2018 - Jan. 2020

Master's in Computer Science (Specialization in Machine Learning)

Relevant coursework : Deep Learning, Machine Learning, Information Retrieval, Computational Social Science using Natural Language Processing, Database Management and Query Languages, Analysis of Algorithms, Distributed Systems.

Vidyalankar Institute of Technology, University of Mumbai, India

Aug. 2014 - May 2018

Bachelor of Engineering in Computer Engineering

Relevant coursework : Distributed Databases, Operating Systems, Computer Networks, Artificial Intelligence, Soft Computing, Data Structures

EXPERIENCE

University at Buffalo, Department of Computer Science and Engineering, *Data Science Intern*

Feb. 2020 - Present

- Responsible for collecting and analyzing data for a project studying the 2020 DNC Primary elections and discussions on it on Twitter.
- Collected and preprocessed over 2 billion tweets over the course of one month using the Twitter streaming API.
- Performed sentiment analysis on the tweets and responsible for providing insights like the progression of overall sentiment about a candidate over a month, daily trending hashtags and mentions using graphs and visualization tools.

SKILLS

Programming: Python, Java, MySQL, JavaScript, HTML/CSS, AJAX, jQuery, PHP, XQuery, C

Libraries: Scikit-learn, PyTorch, Tensorflow, Keras, Pandas, NLTK, OpenCV, Java socket API, Map Reduce

Tools: Jupyter, Git/Bitbucket, Android Studio, Apache Solr, MATLAB, Visual Studio Code, Tableau

Databases/Cloud: SQL, PostgreSQL, Amazon Web Services(EC2, Lambda), Hadoop, MongoDB, Snowflake

PROJECTS

Movie recommendation system (Python, Keras, Tensorflow, Numpy, PyPlot, AWS EC2)

- Implemented content-based and collaborative recommendation systems by using the MovieLens dataset.
- Experimented with different values of dropout, optimizers, learning rates and compared the results by calculating the RMSE values.

Handwriting comparison for digital forensic analysis (Python, Tensorflow, Keras, Pgmppy library, Pandas, PyPlot)

- The task was to compare two samples and determine if they were written by the same writer.
- A hybrid Bayesian model constructed to compare two samples gave an accuracy of 85.8%, a Siamese Convolutional Neural Network gave a training accuracy of 99.92%

Search ranking & analytics based on dissecting Twitter data (Apache Solr, Python, Twitter Rest API, Tableau)

- Retrieved, preprocessed and indexed 100k tweets using the Twitter API and Apache Solr.
- A BM25 model-based information retrieval engine was created. Sentiment analysis was performed on the retrieved tweets and the tweet map and word clouds were created dynamically.

Study of language and age on Twitter (NLTK library, Scikit-learn, Tensorflow, Keras)

- Retrieved and annotated tweets for gender and age. The data was preprocessed using NLTK library and text features were generated using tf-idf values.
- Prediction accuracies using Logistic Regression, Support Vector Machine and Convolutional Neural Network were compared.
- The tweets were analyzed to observe tweet styles across different age groups and changes in trends over time over time.

Simple Amazon Dynamo (Java, Android Studio, Socket Programming, Multithreading)

- Built a distributed data storage system similar to Dynamo: Amazon's highly available key-value store.
- Used Android Studio and multithreading to implement Java's Socket Programming API to build a distributed system that provides availability, failure handling, version control and rollback.

PUBLICATIONS

'Objects Talk - Object Detection and Pattern Tracking Using TensorFlow', published in the IEEE Xplore library.

Presented in the International Conference on Inventive Communication and Computational Technologies, 2018.