Vyshaal Narayanam

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Education

NEU(Northeastern University) — *Boston, MA*

Master of Science in Computer Science - 3.62/4 — *Sep 2016 - Exp. Dec 2018*

- Software Development, Web Development, Information Retrieval, Data Mining, Parallel Data Processing-Map Reduce, Machine Learning

DAIICT(Dhirubhai Ambani Institute of ICT) — *Gandhinagar, India*

Bachelor of Technology in Information & Communication Technology — *July 2011 - May 2015*

- Algorithms & Data Structures, Object Oriented Design, Graph Theory, Operating Systems, Database Management Systems, Cryptography

Skills

Languages	Java, Python, R, C/C++, Scala, MATLAB, Bash, Racket, SQL, NoSQL, LaTeX
Web/Frameworks	HTML/CSS, Bootstrap, Javascript, JQuery, AJAX, AngularJS, ExpressJS, NodeJS, REST, Spring, JUnit
Big Data	Hadoop, HDFS, MapReduce, YARN, Spark, Hive, Weka, MongoDB, AWS(EC2,S3,EMR,Elastic BeanStalk)
Libraries	pandas, NumPy, NLTK, scikit-learn, TensorFlow, beautifulsoup, selenium, gensim, re, plotly, pptx, cProfile
Tools	MS Office, Git, Postman, MySQL, Tomcat, Jenkins, Jira, Tableau, Anaconda, Maven, sbt, npm
IDEs	IntelliJ, PyCharm, RStudio, WebStorm, Spring Tool Suite, Visual Studio, Jupyter Notebook

Experience

Natixis Investment Managers (Portfolio Research and Consulting Group) — *Boston, MA*

Data Analytics Co-op — *Jan 2018 - June 2018*

- Developed PRCG Scorecard - a tool that evaluates the performance metrics and the ranks of various securities within each morningstar category. Automated generation of customized client reports in powerpoint using python-pptx library.
- Built a Risk Dynamic Framework to analyze the risk exposure of various market signals on a security using machine learning techniques.

ZapStitch Technologies — *Bangalore, India*

Software Developer — *April 2015 - April 2016*

- Developed integrations to automate dataflow across cloud applications (like Shopify, Quickbooks, Salesforce, Mailchimp) in different domains using their APIs.

InFoCusp — *Ahmedabad, India*

Research Programmer Intern — *Dec 2014 - Apr 2015*

- Programmed web crawlers to collect stock related data, which is later used to discover features in the time series and predict future returns using deep learning techniques.

Academic Projects

Boston Public Schools - Transportation Challenge — *Boston, MA*

Software Development — *May 2017 - June 2017*

- Implemented a Hierarchical Clustering Algorithm(AGNES) on Boston Public Schools to efficiently assign uniform bell timings to minimize the deadhead time of buses. Distance between schools were obtained from Google Distance Matrix API.

NearBy — *Boston, MA*

Web Development — *Jan 2017 - April 2017*

- Created a MEAN Stack Application **NearBy** where users can search for places to visit, shop, eat near them using Foursquare API. Users can save their favorite locations, also view the reviews given by their friends in the activity feed.

Text Based Search Engine — *Boston, MA*

Information Retrieval — *Sep 2016 - Dec 2016*

- Designed Information Retrieval models TF-IDF, Cosine Similarity and BM-25, evaluate and compare performances by computing metrics like Precision and Recall. Implemented pseudo relevance feedback technique using Rocchio's algorithm to improve the search results.

Parallel Data Processing — *Boston, MA*

Map Reduce — *Sep 2017 - Dec 2017*

- Processed large weather dataset on AWS-EMR clusters to find temperature variations of each station using different design patterns in MapReduce framework.

Yelp Restaurants Review Analysis — *Boston, MA*

Data Mining — *Sep 2017 - Dec 2017*

- Discovered latent features from positive and negative reviews of restaurants in Yelp dataset by running Latent Dirichlet Allocation(LDA) algorithm. Google Cloud Natural Language API is used for sentiment classification of reviews.

Imbalanced Classification — *Boston, MA*

Machine Learning — *July 2018 - Aug 2018*

- Performed classification on an imbalanced dataset using Random Forest Classifier. Skewness is handled by applying SMOTE(Synthetic Minority Oversampling Technique) and thereby improving the Recall of the model.

Activities

NEU (Northeastern University) — *Boston, MA*

Teaching Assistant - CS1800 Discrete Structures — *Fall 2016, Fall 2017*

- Organized class activities during recitations to improve student interactions. Graded and provided feedbacks to the students through their weekly assignments.