

EDUCATION

- **Stony Brook University** New York, U.S.A.
Master of Science in Computer Science (Graduating 2021) *Aug. 2019 – Present*
 - **Courses::** Analysis of Algorithms, Natural Language Processing, Data Science, Theory of Computation
 - **Teaching Assistant::** CSE 214 - Data Structures
- **K.J.Somaiya College of Engineering (University of Mumbai)** Mumbai, India
Bachelor of Engineering in Information Technology; First Class with Distinction (72.9%) *Aug. 2011 – June. 2015*
 - **Courses::** Data Structures and Algorithms, Artificial Intelligence, Discrete Mathematics, Data Warehousing

EXPERIENCE

- **J.P. Morgan Chase & Co.** Mumbai, India
Associate (Senior Application Developer) *Feb 2018 – Aug 2019*
 - **NLP based Query Service:** An interactive system to resolve user queries that uses a model trained on the CRF classifier from StanfordCore NLP and returns the nearest possible solution from an existing knowledge base.
 - **Trader Analytics:** Statistical and analytical tools including absolute and percent price variation, market share and standard deviation of Stocks based on historic data to assist traders in making better decisions.
 - **Memory Optimization:** Performance tuning of application memory consumption and (Garbage First) G1 Garbage Collection through careful heap analysis of humongous allocations.
 - **Real-Time Pricing Solution:** Developed a component from scratch which approximates market risk in real-time using live prices and Taylor Series; and publishes the results onto a messaging interface using TDD principles.
- *Technology Analyst (Application Developer)* *July 2015 – Jan 2018*
 - **Risk Management System:** Core application used by Traders for visualizing and hedging risk:
 1. Optimized the Positions and Trades feeds processing using LMax Disruptor, a low latency queue library.
 2. Process startup time improvement by 50% through the use of concurrency and Spring Annotations.
 - **Market Data Source:** Developed a framework for validating an in-house process that publishes live market data
 - **Shell Scripting and Java SSH:** Shell scripts to streamline deployment and startup of applications on servers.
 - **MongoDB:** Proficient in setting up standalone/replica set instance, data manipulation and backup/restoration.

PROJECTS

- **Identifying Toxicity in Online Interactions (*Ongoing*):** Apply sequence based neural models to identify toxicity in Wikipedia comments. Also identify any bias that might have crept in the data due to manually labelling the dataset.
- **Predict Chess Player Rating (*Ongoing*):** Predict the Elo ratings of a player from the moves sequence data.
- **Skip-gram based Word2Vec Implementation:** Word2Vec implementation with analysis of cross entropy loss v/s noise contrastive estimation as the objective function. Evaluation is done on the semantic task of word analogies.
- **Arc Standard based Dependency Parser:** A Neural Network Dependency Parser based on a 2014 paper which uses word, POS-tag and label embeddings to create a dependency tree by applying arc-standard transitions.
- **Physual(*Capstone*):** A text to scene generation system to visualize Mechanics word problems based on StanfordCore NLP, Java 3D and Blender Models.
- **Miscellaneous:** 'Inverted Index Builder', 'News Article Classifier', 'Products Review Sentiment Analyser', 'Songs Recommender System' and 'Similar Document Clustering System' based on tf-idf and page rank algorithms.
- **Email Template Generator:** Built on the handlebars framework, creates reactive templates to send out email alerts.
- **Reliable UDP:** Server-Client Exchange with Checksum validation and re-transmission in case of corrupt data.

PUBLICATION(S)

- **Visualization of Mechanics Problems based on Natural Language Processing:** Summarized the research efforts and results of the aforementioned Capstone Project. (*International Journal of Computer Applications - April, 2015*)

TECHNICAL SKILLS

- **Languages:** Java, Python, Unix Shell Scripting, SQL, MATLAB
- **Frameworks:** Spring, Spring-Boot, Tensorflow, NumPy, Scikit-Learn, Pandas, Keras, Matplotlib
- **Databases:** Sybase ASE, MongoDB, MySQL
- **CI Tools:** Gradle, Team City, Git, Bitbucket, Ant, Jenkins, YourKit