

🎓 EDUCATION

- **Stony Brook University** New York, U.S.A.
Master of Science in Computer Science; GPA: 3.93 2019 – 2021
 - **Courses:** Analysis of Algorithms, Data Science, Natural Language Processing
 - **Teaching Assistant:** CSE 214 - Data Structures
- **University of Mumbai** Mumbai, India
Bachelor of Engineering in Information Technology; First Class with Distinction (72.9%) 2011 – 2015
 - **Relevant Courses:** Data Structures and Algorithms, Operating Systems, Discrete Mathematics

🔧 EXPERIENCE

- **J.P. Morgan Chase & Co.** Mumbai, India
Senior Application Developer Feb 2018 – Aug 2019
 - **NLP 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:** Implemented functionalities such as absolute and percent variation, market share and standard deviation of stock prices based on historic data to assist traders in making better decisions.
 - **Memory Optimization:** Performance tuning of heap consumption and G1 Garbage Collection through careful analysis of humongous allocations resulting in 80% fewer memory related issues.
 - **Real-Time Pricing:** Developed a component which approximates market risk in real-time from live underlying prices; and publishes the results for consumption. It helped retire a legacy system thus saving the firm ~\$250k.
- *Application Developer* July 2015 – Jan 2018
 - **Risk Management System:** Worked extensively on the core app used by traders for visualizing and hedging risk;
 1. Optimized the Positions feed using LMax Disruptor, a low latency queue library for upto 20% faster processing.
 2. Process startup time improvement by 50% through the use of concurrency and Spring annotations.
 - **Market Data Source:** Framework for validating the functionality of the critical market data publisher and reporting results using Java MXBeans and Apache POI. Reduced the manual testing effort by 90%.
 - **Quick-Deploy:** Streamlined the deployment, startup and health check of application modules in production.
 - **MongoDB High availability:** Mechanism to switch from replica set to standalone configuration on the fly in case of a data center failure. Ensured business continuity during critical failures and reduced operational risk.

🏠 PROJECTS

- **Toxic Online Comments:** Applied Deep Learning and Transfer learning to identify Toxicity in Wikipedia comments. Evaluated and compared the performance of sequential and state-of-the-art BERT models on the task.
- **Chess Player Ratings:** A regression based model to predict the Elo rating of a player from the moves sequences.
- **Relationship Extraction:** An attention based and its performance evaluation on the SemEval-2010 Task 8 dataset.
- **Skip-gram based Word2Vec:** 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.
- **Physual(Capstone):** A text to scene generation system to visualize Mechanics word problems based on StanfordCore NLP, Java 3D and Blender Models.
- **Miscellaneous:** '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 templates to send out reactive 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