

# Aveena Kottwani

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## Education

**Master's in Computer Science**, Stony Brook University

**Aug 2019 - Dec 2020**

**Teaching Assistant:** Data Structures and Algorithms (CSE 214)

**Bachelor's in information technology engineering**, Sardar Patel Institute of Technology

**Aug 2012 - June 2016**

**Relevant Courses:** Machine Learning, Distributed Database Systems, Algorithms, Cloud Computing, Probability and Statistics, Data Science Fundamentals, Data Structures, Operating Systems, Computer Networking

## Work Experience

### Juniper Networks (Mist Systems)

**Software Engineer Intern**

**June 2020 - Aug 2020**

- Created highly scalable public facing APIs for providing location data to deliver wayfinding services
  - Upgraded the Spark infrastructure from EMR clusters to Kubernetes using open-sourced GCP Spark-on-K8s operator saving 30% infrastructure cost
  - Created automated monitoring and alerting for infrastructure components in SignalFx, Prometheus, Grafana
- Technologies: Django, Python, Postgres, Redis, Kubernetes, SignalFx, Prometheus, Grafana, Terraform, AWS, GCP

### Nomura Nvantage Consultancy (Banking)

**Senior Software Developer – Mumbai, India**

**July 2018 - Aug 2019**

- Rearchitected Corporate Action application from a monolith to microservices architecture for notification and payments modules using Java and Spring framework increasing fault tolerance by 60%
- Revamped deployment lifecycle to CI/CD pipelines in Jenkins, Docker containers and Kubernetes reducing the deployment time from ~2 hours to 30mins in any environment
- Designed a question-answer chatbot for corporate action events for real-time data reporting utilized by 100 key management stakeholders

Technologies: Java, Python, Docker, Sybase, Shell, Jenkins, Maven, Git, Spring Boot

### Nomura Investment Bank

**Software Developer - Mumbai, India**

**July 2016 - July 2018**

- Devised a new notification and payments system to efficiently process trade events using Apache Kafka. Improved processing throughput from ~2M to ~50M events/hour.
- Designed and deployed Trade Status Reporting Dashboard and its backend RESTful web services catering to 10,000+ traders and middle-office teams
- Created automated tests using Robot framework to ensure 100% code coverage

Technologies used: Apache Kafka, Java, Spring MVC, Sybase, Shell, Perl, Ant, Adobe Flex, SVN

## Academic Projects

[github.com/aveenakottwani](https://github.com/aveenakottwani)

**Eye tracking Data Analytics:** Predicting Human Eye Fixations via an LSTM-based Saliency Attentive Model and using different optimization techniques to improve the accuracy (Jan 2020-Present)

**Twitter Data Analytics:** Processed Twitter data on the Hadoop Distributed Filesystem (HDFS) using MapReduce to identify locations for highest opioid usage regions on geospatial data

**Tech:** PySpark, Hadoop

**Action Classification Using RNN:** Based on the sequential data, trained recurrent neural networks (RNNs) with different parameters to classify human actions with 87% accuracy using optimization techniques

**Tech:** PyTorch, Jupyter

**IMDb Movie Popularity:** Implemented a predictive model for movie popularity, creation of popularity metrics and using Xgboost and decision-tree-based algorithms to get 89% accuracy.

**Tech:** Python, Jupyter, Scikit, BeautifulSoup

**Text Summarization:** Developed context-based summarization tool to convert the large text document to meaningful information obtaining Word2Vec vectors, POS tags, N-grams and published my work in [IEEE 2016](#)

**Tech:** Java, NLTK

## Technical Skills

Language: Python, JAVA, Go, C++

Frameworks: AngularJS, React, Node.JS, REST Web services, Kubernetes, Docker, Ansible, Spring MVC Framework

Databases: MySQL, Postgres, Sybase IQ, Redis, Apache Spark, PySpark

## Publications and Achievements

- Kottwani, A; Gupta, H; Chaudhari, S: Text analysis and Information Retrieval of Text Data – [IEEE WiSPNET 2016](#)
- Awarded Special Technology Accomplishment Recognition in 2017 and Going Extra Mile Award in 2018.
- IEEE Programming League - Secured 11<sup>th</sup> rank among students participating across India (2015)
- Recipient of J.R.D Tata Scholarship awarded to meritorious students across India for the year 2013, 2014 and 2015.