

# VARUN AGARWAL

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## EDUCATION

Dwarkadas J. Sanghvi College of Engineering, University of Mumbai, India  
B.E. in Information Technology – CGPA: 9.12/10.00

2014 - 2018

## PROFESSIONAL EXPERIENCE

Software Engineer, JPMorgan Chase & Co.  
Asset & Wealth Management, Mumbai, India

Jul 2018 – Present

- Developed Java applications having micro-services architecture using Spring Boot & deployed on private cloud to reduce infrastructure costs by 70%. Implemented authentication, actuators, caching, load balancers, loggers & session management.
- Used multithreading to reduce processing time from more than 2 minutes to less than 15 seconds while ensuring transactions and rollback capabilities.
- Developed front end using React-Redux and wrote SQL queries and procedures.
- Followed agile practices and implemented CI/CD pipelines with SonarQube & Black Duck scans.
- Awarded for developing a React-native solution for NGO 'Annadhan' in Force for Good initiative.

Android Developer Intern, Zaarvii Technologies

Dec 2016 – Jan 2017

- Developed android application for an IIT Bombay based startup with Google maps integration for their home automation solutions.

## TECHNICAL SKILLS

- Languages: Java, Python, JavaScript, PHP, SQL, HTML, CSS, NoSQL(basic), C++(basic)
- Technologies & Frameworks: Spring boot, React, Redux, React-Native, Jupyter notebook(basic)

## PUBLICATIONS & PROJECTS

Twitter Analysis for Disaster Management:

IEEE Xplore

- Presented & awarded as **Best Paper** of the Session at ICCUBE Conference 2018 (ISBN: 978-1-5386-5257-2)
- Developed an application for analyzing tweets to help government bodies & NGO's for rescue purposes during disasters.
- Leveraged NLTK for parsing tweets, tokenizing, stemming and Word2Vec for word vectors.
- Implemented Geo-Location feature that uses coordinates of tweets to plot dangerous & help-providing locations on a map.
- Ability to flag false rumors and provide statistics like death toll, number of people missing, etc.

Automated Aspect Extraction and Aspect Oriented Sentiment Analysis on Hotel Review Datasets

IEEE Xplore

- Presented research paper at ICCUBE Conference 2018 (ISBN: 978-1-5386-5257-2)
- Extracted aspects dynamically from a given dataset and evaluated reviews based on the extracted aspects.
- Used Word2Vec for word vectors, K-means clustering for similar-meaning aspects & NLTK for tokenizing, stemming, etc.
- Performed sentiment analysis on POS tags extracted from Stanford Dependency Parser & used WordNet similarity to associate them to relevant aspects.

Chaakri : E-commerce application for NGO

- Developed an Android application to manage orders & distribution of goods for both B2B & B2C markets.
- Developed admin console using HTML, CSS, JavaScript, and Google charts for inventory management & analytics of sales.
- Used Google Distance Matrix & other social media API's for finding the nearest middle-women & recognition of best performers.

Distributed Library System

- Developed a distributed library system application using Java RMI.
- Used Strict 2 Phase locking protocol to ensure database concurrency & 2 Phase commit protocol to ensure replication consistency & fault tolerance of the distributed database.

Farmer's Market

- Developed an Android application for farmer's to sell crops directly to buyers with easy registration by scanning Aadhar Card ID.
- Introduced multilingual functionality to ease the use of application for less educated farmers.
- Used Recurrent Neural Network to predict the best suitable crop for farming based on the soil & weather conditions.

## ACHIEVEMENTS AND EXTRA-CURRICULAR

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|---|------|
| • Events Head, Association for Computing Machinery – Awarded Best Student Chapter, DJSCE                        | 2015 |
| • Events Head, National Service Scheme – Completed 120+ hours organizing social events                          | 2015 |
| • Logistics Head, Computer Society of India – Awarded Best Active CSI Branch, India                             | 2016 |
| • Runner Up – JPMorgan's Code for Good Hackathon, Mumbai  | 2017 |
| • Best Academics Award – Three consecutive 10 pointers (Semesters IV,V,VI)                                      | 2017 |
| • AWS DeepRacer – Member of the only team in JPMC Mumbai to promote Machine Learning & its use cases in finance | 2019 |