VARUN AGARWAL

+1 (470) 815-6937 | varun.agrwl96@gmail.com | linkedin.com/in/varunagrwl96 | varunagrwl96.github.io | Atlanta, GA

EDUCATION

- **Georgia Institute of Technology**, Atlanta, GA   Aug. 2021 - Dec. 2022
  Master of Science in Computer Science   ***GPA: 4.0/4.0***
  Graduate Research Assistant - Prof. Thad Starner

- **Dwarkadas J. Sanghvi College of Engineering,** University of Mumbai, India   July 2014 - May 2018
  Bachelor of Engineering in Information Technology   ***GPA: 9.12/10***

EXPERIENCE

- **Software Engineer Intern, Meta (Facebook)**, Seattle, WA   May 2022 - Aug. 2022
  - Designed & implemented status monitoring for Ad violation detection algorithms on Instagram & Facebook.
  - Created **dynamic directed graphs** for above algorithms using React and metrics dashboard using SQL.
  - Improved development speed by **20x** for the team by reducing pipeline runtime from **3 hours** to **10 minutes**.
  - Created tool to derive insights like execution time, no. of ad labels sent for human reviewing, labels reviewed, etc.

- **Graduate Research Assistant**, Georgia Institute of Technology   Aug. 2021 - Present
  - Caught **22** students cheating by developing secret tools that detect plagiarism in both online and take-home exams.
  - Published a chrome extension for online discussion forum Edstem providing post suggestions & recommendations.

- **Associate, JPMorgan Chase & Co.**, Mumbai   Jan. 2021 - July 2021
  - Developed front-end UI using React-Redux for thousands of advisors trading in primary & secondary (FX) markets.
  - Improved speed by **5 seconds (50%)** in sequential processing of trades by introducing concurrency.

- **Software Engineer II, JPMorgan Chase & Co.**, Mumbai   Jan. 2020 - Dec. 2020
  - Built multiple Spring Boot applications with micro-service architecture. Implemented concurrency, actuators, caching, load balancers & loggers.
  - Reduced infrastructure **costs by 70%** by deploying applications on a private cloud.
  - Reduced the shares allocation process time from **>2 mins to <15 secs** by introducing multithreading.
  - Reduced latency by introducing **Kafka** for high-performance processing of trades.
  - Subject Matter Expert at the Code for Good Hackathon for 120+ students for two consecutive years (2019 & 2020).

- **Software Engineer I, JPMorgan Chase & Co.**, Mumbai   July. 2018 - Dec. 2019
  - Reduced deployment effort by more than **90%** by implementing the CI/CD pipeline (Jenkins & Jules) incorporating various scans.
  - Followed proper agile practices including sprint planning, daily standup, backlog refinement, retrospective, etc.
  - Awarded for developing a React Native solution for NGO 'Annadhan' in the Force for Good initiative over 8 months.

TECHNICAL SKILLS

- **Languages:** Java, Python, JavaScript, TypeScript, SQL, C++
- **Frameworks/Libraries:** React, Redux, Spring Boot, Cloud Foundry, GraphQL, Kafka, Git, Numpy, Pandas

PUBLICATIONS & PROJECTS

- **Twitter Analysis for Disaster Management**   IEEE Xplore
  - Analyzed tweets & plotted geolocations to help government bodies & NGOs for rescue purposes during disasters.
  - Leveraged NLTK for parsing tweets, tokenizing, stemming and Word2Vec for word vectors.
  - Awarded as the **Best Paper** of the Session at ICCUBEA Conference 2018 (ISBN: 978-1-5386-5257-2)

- **Automated Aspect Extraction & Aspect Oriented Sentiment Analysis**   IEEE Xplore
  - Extracted aspects dynamically using Stanford Dependency Parser and evaluated reviews based on those aspects.
  - Used Word2Vec, K-means clustering & WordNet similarity for correlated aspects, NLTK for tokenizing, stemming, etc.

- **Chaakri: E-commerce application for NGO**
  - Developed an Android application to manage orders & distribution of goods for both B2B & B2C markets.
  - Used Google Distance Matrix to find the nearest middle-women & other social media API's to accolade best performers.
  - **Winners** among 120+ students for the NGO 'SaNiSa' at the JP Morgan Code for Good Hackathon.

ACHIEVEMENTS & EXTRACURRICULAR ACTIVITIES

- **Events Head, Association for Computing Machinery**: Awarded Best Student Chapter, DJSCE.   2015
- **Events Head, National Service Scheme**: Volunteered 120+ hours in organizing social events.   2015
- **Logistics Head, Computer Society of India**: Awarded Best Active CSI Branch in whole India.   2016