

# Vaibhav Agrawal

va8817@gmail.com | +1 (628) 946-2052 | github.com/im-vaibhav  
im-vaibhav.github.io | San Francisco, CA | linkedin.com/in/iamvaibhav

## EDUCATION

**NEW YORK UNIVERSITY**  
**MS IN COMPUTER SCIENCE**  
Dec 2020 | New York, NY  
GPA: 3.85 / 4

**IIT KHARAGPUR**  
**BACHELOR OF TECHNOLOGY**  
Aug 2019 | Kharagpur, India  
Major in Civil and Minor in CS  
**Gold Medalist** | GPA: 9.03 / 10

## COURSEWORK

### GRADUATE

Design and Analysis of Algorithms  
Operating Systems  
Computer Networks  
Database Systems  
Application Security  
Deep Learning  
Java - Special Topics  
Big Data | Cloud Computing

### UNDERGRADUATE

Algorithms & Data Structures  
Probability and Statistics  
Switching Circuits and Logic Design  
Computer Architecture & OS  
Machine Learning  
Artificial Intelligence  
Natural Language Processing

## SKILLS

Over 5000 lines

• C++ • Java • Python • C

**Full Stack Tools**

AWS • Android • JavaScript • Django  
• React.js • Agile • Node.js • Selenium

**Data Science**

Statistics • MapReduce • Spark • Scala  
• R • Kafka • Elastic Search • Kibana

**Machine Learning & AI**

Scikit-Learn • Pandas • SparkML  
NLTK • Pytorch • Keras • Tensorflow

**Database**

• MySQL • MongoDB • DynamoDB

## ACHIEVEMENTS

Holder of 2019 Anukul Chandra Sarkar  
Memorial Gold Medal at IIT Kharagpur for  
achieving **department rank 1**

**Ranked 595** among 1 million in the 2012  
International Mathematics Olympiad

## EXPERIENCE

**Twitich | SOFTWARE DEVELOPER ENGINEER**  
March 2021 – Present | San Francisco, CA  
• SDE-1 in Commerce Team

**New York University | SOFTWARE DEVELOPER**  
October 2019 – Dec 2020 | New York, NY

- Built API driven web app to manage a tutoring program in Django and React
- Developed a dedicated algorithm for matching students and tutors into individual and shared tutoring sessions

**Salesforce | PRODUCT MANAGER INTERN**

June 2020 – Aug 2020 | San Francisco, CA

- Built core release management tool on GUS to provide user a seamless experience while being agile in their production cycle
- Worked directly with customers to identify pain points and validate product roadmap while collaborating cross-functionally with engineering and UX teams

**IISc Bangalore | RESEARCH INTERN (STATISTICS AND TESTING)**

May 2018 - July 2018 | Bengaluru, IN

- Developed a dedicated algorithm to extract road links using Google Maps API
- Analyzed Google's traffic data to explore probability distributions of link-level traffic speed for efficient route choice making

**IIT Bombay | APPLIED MACHINE LEARNING INTERN (NLP)**

May 2017 – Oct 2017 | Mumbai, IN

- Designed an algorithm and improved the accuracy of word corrections up by 10% by introducing semantic language constraints of the Sanskrit grammar
- Further demonstrated different machine learning approaches like attention models and achieved the best F-score of 93.72 with LSTM
- Also developed an Android App using fragments layout to help users learn Sanskrit language with a built in text to speech component

## PROJECTS

**Twitter Bot Detection | BIG DATA**

Spring 2020 | New York, NY

Built a machine learning model to identify Twitter bots that spread political propaganda on big data scale (accuracy of 91%) using SparkML, MongoDB and Kafka

**AWS Projects | CLOUD COMPUTING**

Spring 2020 | New York, NY

Built server-less web apps on AWS for smart door authentication, email spam filtering and NLP powered photo search using AWS Lex, Kinesis, Rekognition and Sagemaker

**Crash Severity Analysis | BACHELOR'S THESIS (DATA MINING)**

July 2018 – April 2019 | Kharagpur, IN

Analyzed traffic data on vehicular crashes using several non-parametric machine learning algorithms and achieved the best accuracy of 90% with XGBoost

## PUBLICATIONS

- [1] V. Agrawal et al. Crash severity analysis through nonparametric machine learning methods. *Journal of the Eastern Asia Society for Transportation Studies*, (2019).
- [2] D. Adiga, R. Saluja, V. Agrawal, and et al. Improving the learnability of classifiers for sanskrit ocr corrections. *17th World Sanskrit Conference, Vancouver, IASS*, (2018).