Vaibhav Agrawal

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EDUCATION

NEW YORK UNIVERSITY
MS in Computer Science
Dec 2020 | New York, NY
GPA: 3.83 / 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
Cloud Computing
Deep Learning
Java - Special Topics
Big Data | DevOps

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

New York University | Software Developer
October 2019 – Present | New York, NY
- Building 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
- Building core release management tool on GUS to give users a seamless experience while being agile in their production cycle
- Working 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

Stance Detection from Tweets | Natural Language Processing
Fall 2019 | Kharagpur, IN
Identified different stances adopted by the people on cancer from an extensive collection of tweets using Tf-Idf vectors and deep learning algorithms such as LSTM

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).