

ADITYA PANDEY

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EDUCATION

New York University - Courant Institute of Mathematical Science

Master of Science in Computer Science — GPA: 4.0/4.0.

May 2023

New York, NY

- Coursework: Real-time Big Data, Cloud and ML, Big Data and ML Systems, Algorithms, Advanced DB, Operating Systems.

PES University

Bachelor of Technology in Computer Science — Specialization in Data Science — GPA: 9.81/10.0.

July 2020

Bangalore, India

- Prof. CNR Rao Merit Scholar - awarded to top 10 students in the University (all 8 semesters).

EXPERIENCE

LiveRamp

May 2022 – Present

Software Engineering Intern

New York, NY

- Working on the Matching sub-team and re-designing the job priority assignment logic to improve the performance of LiveRamp's core data matching service, reducing the number of jobs getting promoted to the heavyweight clusters by ~40%
- Improved orchestration of jobs by identifying and classifying workflow errors into transient and non-transient types and implementing an efficient job retry heuristic in the Java-based service. This reduced the number of jobs being unnecessarily retried by ~70%
- Redesigned the output storage layer of the Connector Service to reduce hot-spotting and increase throughput of read & delete GCS operations by ~20%. This improved load-balancing capabilities and fault tolerance preventing a critical failure during a GCP outage.
- Used Datadog and LogDNA to monitor and debug production systems by creating custom queries and dashboards for easy readability

New York University

September 2021 – Present

Graduate Teaching Assistant

New York, NY

- Course(s): **Cloud and ML** (Fall 22), **Fundamental Algorithms** (Fall 21, 22), **Basic Algorithms** (Spring 22).
- Handled grading of assignments and tutoring for 80+ students. Created assignments and helped students with the fundamentals of Algorithms, Data Structures, Kubernetes and working with multiple cloud providers (GCP, AWS and IBM Cloud)

Walmart

January 2020 – August 2021

Software Engineer II (Data)

Remote

- Developed and piloted a Spark and Hadoop based Adjustment Management Tool solution to prevent faulty item stock adjustments. Leveraged big-data technologies to create guardrails increasing the average quantity match accuracy from 71% to 86%.
- Collaborated and led the building of a Java alerting service to validate streaming data from Kafka with a Hadoop, SQL and NoSQL DB. Helped in reducing recovery time by ~10% and monitoring in case of data streaming failure.
- Launched a Node.js (Typescript) based orchestration micro-service, "Mozart" to provide a layer of abstraction for APIs from multiple legacy services utilizing CI/CD. The framework helped reduce future developmental effort from ~ 10 weeks to ~ 2 weeks.
- Received the Walmart Bravo Award in June 2021 (within 12 months of joining team).

Walmart

June 2019 – August 2019

Software Engineering Intern

Bangalore, India

- Developed and launched a WhatsApp-based chatbot for the Mexico market. Integrated agent support by linking LivePerson APIs with internal REST APIs by creating a middleware API service using Python + Node.js handling >5000 requests simultaneously.
- Reduced customer support agent transfer rate by 20% - slashing costs by ~ 15%. Created custom metrics in Splunk to monitor systems.

PricewaterhouseCoopers

May 2018 – July 2018

Summer Analyst

Bangalore, India

- Developed and presented a Travel Budget Predictor to optimize travel costs based on business needs as part of the Data Science team. Designed a Decision Tree regression model with limited indicator variables to decrease employee travel costs by ~ 10%.
- Built an automatic data analysis framework to deliver insights using raw input data and output in form of a JSON.

SKILLS

Programming: Python, C, C++, R, Node.js, SQL, Java, JavaScript, HTML, Bash, MySQL

Technologies: Kubernetes, Hadoop, Hive, Kafka, Spark, Keras, PyTorch, Git, GCP, Spring, Docker

PROJECTS & RESEARCH

Comparative Study on the Deployment of ML Models using Kubeflow | *Kubernetes, Python, GCP, AWS, IBM Cloud, Flask*

2022

- Explored and analyzed the process of creating Machine Learning pipelines on multiple public clouds on Kubernetes clusters using Kubeflow. Created an end-to-end image recognition model pipeline with an inference API and hosted a seminar on ML DevOps.
- Hosted a seminar on the intersection of ML with DevOps (MLOPS) for the Capstone. [[Preprint](#)].

DiffAct: A Unifying Framework for Activation Functions | *Python, TensorFlow, Keras*

2021

- Introduced an umbrella of novel activation functions (including non-monotonic functions) and studied shape and functional properties. Demonstrated effectiveness against standard activations in Deep Learning models on Keras/Tensorflow.
- Paper presentation at the International Joint Conference on Neural Networks (IJCNN 2021 - a Core A conference) [[Paper Link](#)].

Intrusion Detection using Sequential Hybrid Model | *Python, R, Keras*

2020

- Created an ML-based Network Intrusion Detection System. Implemented anomaly detection and misuse detection in a sequential manner using a neural network and random forest classifier in R and Python. [[Paper Link](#)]
- Paper presentation at Mosaicom 2020 conference and published in the Springer Algorithms for Intelligent Systems Series [[Paper Link](#)].