ADITYA PANDEY

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EDUCATION

New York University - Courant Institute of Mathematical Science　　　　　**May 2023**
Master of Science in Computer Science; GPA: **4.0/4.0**.　　　　　New York, NY
- Coursework: Fundamental Algorithms; Computer Vision; Operating Systems; Programming Languages.

PES University　　　　　**July 2020**
Bachelor of Technology in Computer Science Engineering; Specialization in Data Science; GPA: **9.81/10.0**.　　　　　Bangalore, India
- Received the Prof. CNR Rao Merit Scholarship - awarded to top 10 students in the University (all 8 semesters).
- Coursework: Big Data; Machine Learning; Deep Learning; Cloud Computing; Databases; Data Analytics; Calculus II/III.

EXPERIENCE

New York University　　　　　**September 2021 – Present**
Graduate Teaching Assistant　　　　　New York, NY
- Course(s): Fundamental Algorithms under Prof. Yevgeniy Dodis.
- Handled grading of assignments and exams for 80+ students; provided actionable feedback based on students' answers.

Walmart　　　　　**January 2020 – August 2021**
Software Engineer II (Data)　　　　　Bangalore, India
- Developed and piloted a Spark and Hadoop based Adjustment Management Tool solution to prevent faulty item stock adjustments. Leveraged big-data technologies to increase average quantity match accuracy by ~ 15 percentage points (from 71% to 86%).
- Launched a Node.js (Typescript) based orchestration micro-service, "Mozart" to provide a layer of abstraction for APIs from multiple legacy services. The framework helped reduce future developmental effort by 80% (from ~ 10 weeks to ~ 2 weeks).
- Built an alerting + reconciliation application to validate streaming data from Kafka with a Hadoop, SQL and NoSQL DB. Helped in reducing recovery time and monitoring in case of data streaming failure.
- Received the Walmart Bravo Award in June 2021 (within 12 months of joining team).

PES University　　　　　**September 2019 – December 2020**
Undergraduate Researcher　　　　　Bangalore, India
- Conducted research in the field of theoretical Machine Learning under Dr. Snehanshu Saha
- 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.
- Presented the paper at the International Joint Conference on Neural Networks (IJCNN 2021 - a Core A conference) [Link].

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 APIs using a Python + Node.js based middleware service.
- Reduced customer support agent transfer rate by $> 20\%$ - slashing costs by $\sim 15\%$; Improved CSAT score by $\sim 10\%$.

PESU I/O　　　　　**October 2018 – January 2019**
Subject Matter Expert　　　　　Bangalore, India
- Acted as a Subject Matter Expert in Data Science in PESU I/O, a peer-to-peer teaching initiative at PES University.
- Designed and taught a course on Data Analytics; Mentored 20+ freshman year students and introduced them to basic statistical concepts such as linear/logistic regression, data visualization and statistical hypothesis testing.

PricewaterhouseCoopers　　　　　**May 2018 – July 2018**
Data Analytics Intern　　　　　Bangalore, India
- Built and presented a Travel Budget Predictor to optimize travel costs based on business needs. Designed a Decision Tree regression model with limited indicator variables to showcase strategies to decrease employee travel costs by $\sim 10\%$.
- 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; JavaScript; Typescript.
Technologies: Hadoop; Hive; Kafka; Spark; Keras; Pandas; REST; Tensorflow; Git; NoSQL; Bash; Git; Postman; Cloud Computing.

PROJECTS & RESEARCH

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 presentation at Mosicom 2020 conference and published in the Springer Algorithms for Intelligent Systems Series [Link].

Identification of At-Risk Students | *C++, Python*　　　　　**2019**
- Derived KPIs to identify 'at-risk' students using data collected from a specially curated C++ based coding competition using attributes such as students self-reported pre-test and post-test confidence + telemetry (no. of compiles, score efficiency, time taken).

Disease Surveillance Using Twitter Data | *Python, JavaScript*　　　　　**2018**
- Surveyed various predictive models based on social media generated data and created an NLP-based mechanism to identify locations vulnerable to outbreaks of dengue by analyzing recent tweets (obtained using JavaScript) on Python.