

# Aditya Maheshwari

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## EDUCATION

### University of Massachusetts Amherst

Amherst, MA

*Bachelor of Science in Computer Science and Mathematics, Minor in Business*

Aug. 2020 – Dec 2023

**Distinctions:** IIT JEE rank 2533 out of 1.4 million, Dean's List, Chancellor's Award Scholarship

**GPA: 3.96**

**Coursework:** Deep and Machine Learning (Stanford), AWS Cloud Practitioner, Data Science, Operating System, NLP Algorithm Design, AI, Search Engine, Databases, Data Structures, Scientific Computing, Statistics, Financial Math

## EXPERIENCE

### PayPal | Software Engineer | California, US

Jun 2023 – Present

- Created robust and auditable tool for fraud science teams to facilitate currency conversion and money sweeping involving 100Ks of accounts, returning approximately \$160M annually from fraudsters to defrauded accounts. This mitigates litigation risks and achieves savings of around \$10M
- Upgraded internal tools along with FTPI, SPARK, and Salesforce integration to allow front and back-office teams and staff to create and process thousands of escalation and data access tickets every month saving \$5M every year
- Orchestrated an automated third-party integration with NCMEC, facilitating the reporting of 2000 annual child exploitation cases to law enforcement. Significantly reducing investigator workload by hundreds of hours
- Engineered a Chat assistant utilizing LLMs to support front office teams in processing case descriptions, selecting the suitable back office team, and automating the prepopulation of form information for streamlined case creation.

### PayPal | Software Engineer Intern | California, US

Jun 2022 – Aug 2022

- Engineered a Java and Spring-based data connector to extract and upload 3.5 million case management logs for process mining, improving real process discovery and monitoring
- Automated daily upload of thousands of new compliance case logs to Celonis via task scheduling, enhancing efficiency and providing valuable process models and simulations for the management system

### TestAIng | Machine Learning Intern | Bangalore, India (Remote)

May 2021 – Aug 2021

- Collaborated with 2 interns to develop 2 ML pipelines for enterprise tools using Python and TensorFlow
- Developed pipeline for time series data and complete concept drift system, which reduces the error by 7%
- Integrated 4 local and 4 global explainability methods to the pipeline to provide better model interpretability

### Arevea. Inc | Software Engineer Intern | Remote

May 2021 – Aug 2021

- Designed an admin portal for a virtual event management business to handle events and schedules using Angular
- Implemented various secure RESTful APIs (Web services) like generation of relational databases with schedule data and custom QR code scanner for events using Node.js and SQL

### UMass CICS | Research Assistant | Amherst, MA

Dec 2021 - Jan 2022

- Analysis and Systematic Evaluation of Causal Inference Algorithms Using Constructed Observational Data by generating and quantifying the complexity of synthetic non-linear data under PhD Student Pracheta using R
- Doing research on explainability of modern NLP search engines using LIME and SHAP and their correlation with human understandable search features under the mentorship of Professor James Allan

## PROJECTS

### CryptoSimulator | Node.js, Express, MongoDB | Link

Dec 2021

- Back-end application to simulate crypto-currency trading utilizing coinbase API for real-time exchange value
- Used various login authentication methods with TFA and API keys to maintain secure wallets for users

### Deep Learning Algorithm | Python | Link

June 2022

- Implemented Music Generator using LSTM and music21 library on CarcassiOP60 and FernandoSor data set
- Wrote the implementation from scratch of a few deep learning algorithms without using python libraries
- Implemented Logistic regression, shallow and deep neural network for image classification and regression prediction

### Hospital Locator | Svelte, HTML, CSS, JavaScript, Node.js, MongoDB | Link

Nov 2020

- Developed a web application that allows users to find hospitals nearby (location-based search) at Hack UMass
- Added a back-end service that can store the hospital's coordinates, availability of beds, etc

## TECHNICAL SKILLS

**Languages:** Java, Python, JavaScript, TypeScript, HTML/CSS, C/C++, R, MongoDB, Oracle, SQL, NoSQL

**Frameworks and Developer Tools:** React, Node.js, Git, GCP, AWS, PyCharm, IntelliJ, Flask, Angular, Express