

# Aditya Maheshwari

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## EDUCATION

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### University of Massachusetts Amherst

Amherst, MA

*Bachelor of Science in Computer Science and Mathematics (DS and Statistics), 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 Learning CMU, Deep & Machine Learning (Stanford), AWS Cloud Practitioner, Data Science, OS, NLP Algorithm Design, AI, Search Engine, Databases, Data Structures, Scientific Computing, Statistics, Financial Math

## EXPERIENCE

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### PayPal | Software Engineer | California, US

Jun 2023 – Present

- Drove cloud-native migration of the compliance case-management platform from on-prem to GCP (Cloud Run, Spanner, GKE, Pub/Sub) with multi-tenant AI-native architecture and presented to SVP/CTO-level leadership
- Engineered a fraud refund and currency-conversion system for Fraud Sciences, recovering **\$160M annually** from fraudulent accounts and mitigating **\$10M** in litigation risk across 100K+ accounts
- Automated Suspicious Activity Report filing across 5 AML rules, eliminating manual investigation on **10K+ cases/year** and saving **30K+ investigator hours**; built Account Bundling tool consolidating **1M+ transactions** for multi-jurisdiction regulatory filings
- Engineered **3 LLM-powered chat assistants** (case processing, team routing, form prepopulation, compliance narrative generation) and **2 Agentic AI solutions** using Crew AI—a voice-activated case-action agent and an Oracle SQL prompt-to-PR generator leveraging schema metadata and historical change requests
- Re-architected the Law Enforcement Fulfillment Portal handling **25K+ subpoenas/year**, reducing latency and storage by **55%**; upgraded SPARK portal and Salesforce integration for front/back-office escalation workflows, saving **\$5M/yr**

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

Jun 2022 – Aug 2022

- Engineered a Java and Spring-based data connector to ETL 3.5 million case management logs to Celonis for process mining, improving process discovery, modeling, simulation and monitoring while enhancing efficiency

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

May 2021 – Aug 2021

- Collaboratively developed ML pipelines for time series data with concept drift system resulting in 7% reduced error
- Integrated 4 local and global explainability methods to the pipeline to provide better model interpretability

### 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

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### Financial News Aggregator with AI Sentiment Analysis | *Python, Anthropic API, Grok, Google Sheets* 2025

- Built a multi-API financial intelligence system integrating 6+ data sources (Alpha Vantage, Finnhub, NewsAPI) with intelligent deduplication and standardized data models for real-time stock portfolio tracking
- Implemented LLM-powered sentiment analysis using Anthropic Claude and Grok with automated Google Sheets integration for portfolio-level signal aggregation

### 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

## TECHNICAL SKILLS

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

**Frameworks and Cloud Tools:** Spring, TensorFlow, PyTorch, LangChain/ Langflow, Crew AI, React, Node.js, Flask, Angular, Express, AWS, GCP, Kubernetes, Git, CI/CD