Aditya Sinha

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EDUCATION

University of Illinois, Urbana-Champaign — IL, USA
Masters in Computer Science; GPA: 4/4 — *Jan 2024 - Dec 2025*
- Coursework: Computer Vision, Cloud Computing, Distributed Systems, Text Mining for LLMs, Parallel Programming
- Graduate Teaching Assistant for the course 'Foundation of Data Curation' with 350+ students

Vellore Institute of Technology — TN, India
Bachelor of Technology, Computer Science Engineering; GPA: 9.39/10 — *Jul 2016 – Sep 2020*
- Coursework: Artificial Intelligence, Machine Learning, Natural Language Processing, Image Processing, Software Engineering

SKILLS

Languages/Build Tools: Java, Python, JavaScript, Reactjs, Bash, Git, Maven, CUDA, Jira, RabbitMQ, Terraform, PySpark
Cloud Platforms/Infrastructure: AWS, Kubernetes, Docker, EC2, SQS, ECS, S3, Lambda, GCP, CI/CD, Azure, Linux
Databases/Big Data: MySQL, Redis, MongoDB, InfluxDb, PGVector, Spark, Hive, Airflow, Elasticsearch, Trino
Machine Learning/Monitoring: PyTorch, RAG, Langchain, Grafana, Prometheus, Loki, Sklearn, Embeddings, Ray

PROFESSIONAL EXPERIENCE

Ensaras (AI for Wastewater Treatment SAAS), *Full Stack MLOps Intern* — Mar 2024 – Aug 2024
- Built a scalable ML pipeline with automated monitoring using Python, Celery, Django, Terraform, Grafana, and GitHub Actions, reducing manual efforts by 15% and boosting productivity.
- Implemented an LLM-based(RAG) AI chatbot using Langchain, GPT-4o, and AWS for answering troubleshooting questions by on-site workers, reducing the team's manual efforts and decreasing troubleshooting time by 45%**.**

Emiza Technologies (Logistics & Warehousing), *Sr. Software Engineer* — May 2023 – Dec 2023
- Led full lifecycle of Shipment Return Service, from on-site requirement collection to development using Spring Boot, and PostgreSQL, and deployed on Kubernetes by creating Jenkins CI/CD pipeline, enhancing worker efficiency by 30%.
- Ideated and Integrated a B2B/B2C Order Cancellation Workflow to the existing system which cut operational inefficiencies by 40%, boosting customer satisfaction by 25%.

Pickrr Technologies (Logistics SAAS), *Sr. Software Engineer* — Jan 2022 - May 2023
- Revamped Shipment Tracking Service into a microservices architecture (Spring Boot, Kafka, MongoDB), improving tracking accuracy by 50% and handling 100M+ daily updates.
- Proposed and Automated shipment status discrepancy resolution, cutting manual workload by 80%.
- Designed an advanced ETL pipeline using Hadoop, PySpark and Airflow for data correction and migration for a wallet service.
- Led development of a subscription service (Java, React) while collaborating with a 5-member cross-functional team in a Jira Agile environment.
- Collaborated across teams to identify shared development needs, created a reusable event scheduling and workflow management service (SpEL, Redis, Kafka, REST APIs).

Oyo Rooms (Hospitality, Unicorn Startup), *Sr. Software Engineer* — Dec 2019 - Jan 2022
- Migrated monolithic order management to microservices (order, payment, billing), increasing system performance by 25%.
- Built a Payments microservice with third-party integration and smart traffic routing, improving transaction success by 20%.
- Optimized the booking API using multithreading and caching with Redis, and transitioned the cron-based unreserve process to a Redis distributed lock, reducing latency by 42%.

PROJECTS / AWARDS / OPENSOURCE CONTRIBUTION

APPFL x Ray - Open Source Contribution — Mar 2025
- Integrated Ray in the APPFL library to run federated learning experiments with different cloud providers.
- Added tutorial to run federated learning experiment using APPFL library on Google Colab notebooks.

GenAI for Machine Fault Detection & Actionable Response — Aug 2024
- Developed a machine fault detection system using CrewAI, LLM(LLaMA3-70b), LangChain, and AutoGen.
- Created a proof of concept (PoC) that integrates RAG for accurate fault diagnostics and real-time action planning.

LLM Application Hackathon Winner (Ashby Prize in Computational Science, NCSA) — May 2024
- Created a real-time emergency response system using LangGraph's, LLM(ChatGPT3.5), Multi-Agent architecture.
- Integrated HuggingFace's Computer Vision models, MongoDB for data storage, and Docker for deployment.