

Aditya Chavan

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EDUCATION

New York University, New York, USA

Master of Science, Computer Science

Awarded Merit scholarship for Graduate program

Coursework: Algorithms, Cloud Computing, Big Data & ML, Software Engineering, FI Algo Trading, MS Thesis Blockchain Scaling

University of Mumbai, Mumbai, India

Bachelor of Engineering, Computer Science Engineering

Awarded Merit scholarship for Undergraduate program

Coursework: Data Structures, Algorithms, Artificial Intelligence, Web Development, Machine Learning & NLP, Database Systems

SKILLS

Programming: Python, Java, JavaScript, R, TypeScript, C, Kotlin, NodeJS, Django, Spring, Flask, Express, HTML, CSS, Angular

Software and Methodology: Hadoop, Dask, PySpark, Databricks, Tableau, Docker, Git, GraphQL, Agile, Scrum, Architecture Design

Machine Learning & Generative AI: Scikit-learn, PyTorch, SciPy, Hugging Face, LangChain, LangGraph, Stable Diffusion, Llama

Others: MySQL, PostgreSQL, Bigquery, Redis, Memcached, Kafka, ActiveMQ, AWS: Kinesis, DynamoDB, Rekognition, Elasticsearch, Lambda, Lex, SQS, SNS, Splunk, Open Observe, Grafana, Prometheus, Jenkins Kubernetes, Dynatrace, Junit, Cucumber

WORK EXPERIENCE

Software Engineer III, Walmart Global Tech

February 2024 – Present

- Working on data ingestion pipelines processing **150 million daily events for 1.6 million** U.S. Walmart Associates, within the Stores, Associates & Platforms team. Implemented RESTful, GraphQL Microservices, improving system modularity and scalability
- Designed and implemented a Kafka-based, multi-layer asynchronous processing service architecture for Tier 0 business-critical services, deployed in multi-region environments to serve **10,000+ Walmart stores** globally.
- Leading cloud cost optimization efforts by optimizing pod scaling, database queries (**reducing execution times by 25%**), and enhanced application performance, resulting in substantial savings. Investigated and built PoCs using LLMs to automate and improve Alerting & Monitoring systems and develop AI-powered SQL query generation and optimization agents.

Research Software Engineer, New York University Center for Neural Science

August 2023 – February 2024

- Developing **highly optimized** Python-based Data Pipelines for functional neuroimaging (fMRI) analysis, employing General Linear Model for trends fitting and compressive spatial summation, running on NYU High Performance Computing Supercomputer cluster
- Utilized specialized neuroimaging libraries for processing and mapping Population Receptive Fields from fMRI data, yielding critical insights into brain's processing of visual stimuli, with **code optimization** resulting in a **5-fold increase in execution speed**

Graduate Teaching Adjunct, New York University

August 2021 – May 2023

- Instructed mathematical finance, calculus, and optimization courses** at NYU Courant Institute, including recitations, office hours, grading, and proctoring. Led data-driven decision-making recitations (Tableau, JMP, SQL, R) for 120+ MBA students at NYU Stern.

Software Development Engineer, Aleria Tech

June 2022 – December 2022

- Engineered SaaS tool for generating Data Driven Insights about Diversity, Equity, and Inclusion initiatives at partner organizations
- Designed and implemented Twilio integration in the platform for sending and receiving messages over WhatsApp, Messages
- Successfully migrated stack to AWS, containerized Django app with Docker for scalability, migrating services to use: Lambda, S3, RDS, ECS, and Elastic Beanstalk, resulting in improved resiliency, enhanced system speed, and **increased system uptime of 99%**

Data Scientist (Graduate Researcher), New York University Stern School of Business

June 2022 – September 2022

- Developed APIs using Python, Google Cloud Platform (Cloud Functions, Cloud Run) and AWS (Lambda, CloudWatch)
- Implemented Generative AI solutions using various APIs: Hugging Face, DeepFace, DALL·E, Truss, and Google Image Search API
- Migrated and developed backend services to ensure compatibility with SCORM standard for seamless integration with NYU's LMS
- Successfully led migration of services to AWS, resulting in a significantly increased user base due to wider system compatibility

Software Engineer, Tata Consultancy Services (*Awarded spot award twice for exceptional performance*)

August 2020 – July 2021

- Worked on communications platform to handle **15 million daily requests**, supporting SMS, email, push notifications, and IVR channels utilizing Python, Java, Spring Boot, PostgreSQL, Redis. Led integration of Microsoft Teams as a new channel
- Enhanced user privacy by developing a notification management dashboard used by **500K+ users**.
- Improved system reliability through Azure cloud migration and CI/CD pipeline implementation.

Software Development Engineer, Sathvachan

December 2018 – July 2020

- Developed full-stack wedding planning platform (Django, Python, MySQL) on Digital Ocean, with advanced hotel booking, an extensive vendor marketplace (photographers, caterers, musicians, decorators, florists, and more), and integrated Google Ads.

PROJECTS

Generative AI-Powered Conversation Co-pilot (*Awarded Best LLM Solution at Cornell LLaMahack*)

- Engineered a real-time conversational co-pilot for video conferencing, integrating LLMs (LLaMA2, GPT-4, PaLM2) with Hugging Face, Langchain, Gradio for advanced, context-aware interactions, using OpenAI's Whisper for precise speech-to-text conversion

Streaming Crime Data To Evaluate Neighbourhood Safety

- Designed and developed a big data pipeline using NYC open dataset and Citizen APP using PySpark, AWS Kinesis, and Data Bricks
- Created interactive dashboards using Tableau and Python to visualize real-time streaming crime data on map with bar/line graphs