




ABHISHEK AGRAWAL

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EDUCATION

New York University

Masters in Computer Engineering, GPA: 3.45/4

Aug 2024 - May 2026

New York, NY

Nagpur University (RCOEM)

Bachelors in Electronics Engineering, GPA: 8.12/10

Aug 2017 - May 2021

Nagpur, India

Awards: Runner-up of Meshmerize Techfest-19 (IIT Mumbai), Qualifiers of ROBOCON-19

Leaderships: Office Bearer (Entrepreneur DC), President (Robotics Club), Networking Lead (IEEE SAC), Photography Head (NSS & Electronics Department)

TECHNICAL SKILLS

AI/ML & NLP: PyTorch, TensorFlow, Scikit-learn, LangChain, Hugging Face, OpenAI APIs, NLTK

Programming Languages: Python, Scala, PySpark, Shell/Linux, Java, JavaScript, HTML, CSS, C, C++

Cloud & DevOps: AWS (Lambda, EMR, SageMaker, S3, EC2, SQS, SNS), Azure, Databricks, Snowflake, Terraform, CI/CD, Docker, Kubernetes

Big Data & Data Engineering: Airflow, Kafka, SQL, PostgreSQL, DynamoDB, MongoDB, Data Lakes, ETL Pipelines, Redis

Web & API Development: Flask, FastAPI, Angular, React, Swagger, Postman, WebSockets

Analytics & Visualization: Tableau, RFM Analysis, A/B Testing, Geospatial Mapping

Tools & Methodologies: Jira, Confluence, Scrum, Agile, Figma, Adobe Creative Suite

Database & Storage Systems: DynamoDB, Snowflake, AWS S3

EXPERIENCES

Data & Backend Engineer (Contractor), NBC Universal Media, India

Aug 2021 - Aug 2024

AI-Powered Intelligent Assistant

- Engineered secure & scalable GenAI APIs using LLM(Hugging Face), NLTK (NLP), and Azure OpenAI, enabling dynamic, contextual interactions.
- Optimized chatbot intelligence with text classification, sentiment analysis, & personalized responses, boosting accuracy and engagement.
- Implemented RBAC (role-based) enforcement, real-time search, & automated knowledge extraction, significantly reducing manual effort.

ETL Optimization for Ad Performance

- Leveraged expertise in Microservices, and Bigdata to architect, implement and migrate, their on-premise distributed ETL pipelines to AWS.
- Unified their different workflows into an adaptive Airflow DAG, integrating with AWS Lambda, EMR Serverless, & modular Python-Scala code, enabling efficient concurrent processing.
- Reduced execution time & operational costs by 40%, significantly improving data processing efficiency and campaign performance tracking.

Metadata-Driven Data Pipeline Manager

- Developed a web platform for AWS S3, Snowflake, and Databricks, automating data ingestion, transformation, and orchestration.
- Optimized big data processing with dynamic cluster selection, and a SQL fabricator, balancing cost and speed for efficient query execution.
- Automated workflows, secure data access (RABC), and infrastructure management using APIs, Airflow DAGs, Lambda, and Terraform.
- Integrated a real-time monitoring and alerting system with CloudWatch and Datadog, ensuring SLA compliance and data integrity.
- Expedited time to market by 75% through service automation, cutting development errors and boosting overall efficiency.
- Built custom GitLab CI/CD pipelines, minimizing deployment errors and accelerating release cycles.

Co-Founder, AR Consultancy Services, India

Aug 2022 - Aug 2024

Founded a startup to drive innovative tech solutions while mentoring graduate interns for industries and tech careers.

Scope & Bidding Assistant

- Architected & deployed a PostgreSQL-driven backend services (inspired by Google Sheets) for dynamic project tracking, contract management, and real-time collaboration via WebSockets.
- Developed a metadata-driven architecture with advanced search, filtering, and hierarchical scope tracking for scalability and seamless navigation.
- Implemented a role-based user management module, streamlining user roles, permissions, and bid interactions with automated notifications.
- Built API-driven microservices, optimizing performance, modularity, maintainability, and integration with existing enterprise systems.

Store Management System

- Designed an RFID-powered jewelry store platform, automating inventory, customer management, and billing for seamless operations.
- Developed a scalable, metadata-driven RBAC secure application using AWS, Python, Angular & PostgreSQL, integrating multi-RF readers, and an anti-theft system enhancing automation, security and customer engagement.
- Led and mentored a team of five graduates, providing hands-on guidance in full-stack development, cloud integration, and agile methodologies.

PROJECTS

Churn Forecaster

- Built a time-series churn prediction model using AWS SageMaker, Scikit-learn, and RFM analysis to identify at-risk customers.
- Deployed a real-time incentive engine with AWS Lambda & DynamoDB, automating personalized rewards and promotions to reduce churn.
- Optimized retention strategies via A/B testing and customer segmentation, boosting engagement and CLV.

Logistics Analytics System

- Designed a PostgreSQL-based data warehouse, built ETL pipelines (SQL, Python) to clean, transform supply chain data, ensuring accurate analytics.
- Developed interactive Tableau dashboards to track delivery performance, order success rates, & demand trends, improving operational efficiency.
- Optimized delivery routes and anomaly detection using time-series forecasting and geospatial mapping, reducing delays.

RELEVANT COURSES

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|--------------------------|-------------------------|------------------------------|------------------------|
| - Machine Learning | - Deep Learning | - Data Engineering (Bigdata) | - Software Engineering |
| - Cloud Computing | - Data Structures | - Algorithm | - Database Management |
| - Object Oriented Design | - Computer Architecture | - Operating Systems | - Data Warehousing |