

ASHISH KAMBOJ

Machine Learning Operations Engineer

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SUMMARY

Machine Learning professional with 13+ years of experience in designing, building, deploying, and operationalizing AI/ML solutions across cloud and on-prem platforms. Proven expertise in MLOps, LLMops, agentic workflows, and scalable AI systems on AWS and Azure.

KEY SKILLS

- **Azure Services** ADF, Function, AI services, API Management, Event Grid, CosmosDB
- **Development tool:** Git, Docker, Kubernetes
- **Visualization:** Apache Superset, Grafana
- **Workflow Orchestration:** Apache Airflow
- **Databricks:** MLflow, Unity Catalog, Delta
- **Vector & NoSQL DBs:** pgvector, MongoDB
- **Regression, Clustering, Random Forest, XGBoost, LightGBM, Time-Series**
- **Python Packages:** Numpy, Pandas, Scikit-learn, Matplotlib, Seaborn, nltk
- **AWS Services:** Sagemaker, Lambda, CodePipeline, DynamoDB, Bedrock
- **Programming Languages:** Python, Pyspark, R, Scala, Java
- **Big Data tools:** Hadoop, MapReduce, Sqoop, Hive, Spark
- **Databases:** SQL Server 2012, Oracle 11g, MySQL, Snowflake
- **AI Agent framework:** LangChain, LangGraph, CrewAI

PROJECTS – AGENTIC-AI WORKFLOWS

CrewAI

- Designed, implemented, and orchestrated multi-agent workflows using CrewAI, demonstrating advanced proficiency in agent-based automation and workflow optimization.
- Developed a robust E-commerce Price Monitoring solution leveraging CrewAI agents and Groq LLM, integrating Amazon-focused web search tools and local embedding models for real-time deal analysis and price intelligence.
- Built AI-driven summarization and translation pipelines with CrewAI, utilizing Groq LLM to automate concise technical documentation summarization and seamless Hindi translation, showcasing strong experience in chained multi-agent task orchestration.
- Integrated CrewAI with MLflow for travel recommendation systems, enabling experiment tracking and conversational traceability for agent-driven itinerary planning and city selection, with local Ollama LLM for efficient inference.
- Applied CrewAI for web scraping and summarization tasks, combining scraping tools and local LLMs to extract and distill key information from complex web sources, demonstrating expertise in knowledge extraction and summarization workflows.
- Engineered agentic research and content generation workflows with CrewAI, automating research, writing, and editing processes for technical articles, and ensuring alignment with SEO, brand voice, and editorial standards via collaborative agent tasks.
- Proficient in configuring CrewAI agents with custom roles, goals, backstories, and tool integrations—including Groq and Ollama LLMs, web search, and scraping tools—to solve domain-specific problems in e-commerce, documentation, travel, and content creation.
- Demonstrated hands-on expertise with CrewAI's advanced features: task dependencies, agent delegation, context passing, external tool integration, verbose execution tracing, and workflow parameterization for real-world use cases.
- Established best practices for AI agent orchestration, agent persona design, and multi-stage workflow implementation using CrewAI, with focus on scalability, modularity, and maintainability of agentic pipelines.

N8n

- Designed and implemented an automated workflow backup system using n8n that performs daily backups of workflow definitions to GitHub, including detection of changes and optimized file management, ensuring robust version control and disaster recovery for business-critical automations.
- Developed an AI-powered workflow in n8n that leverages LLMs (Large Language Models) for contextual output generation, integrating advanced language models (Ollama, LangChain) and memory modules to enable intelligent agentic responses to chat-based triggers, demonstrating expertise in n8n's AI and agent orchestration capabilities.
- Built an n8n workflow for seamless communication with Telegram bots, integrating AI agents for dynamic message generation and automated delivery to Telegram channels, showcasing proficiency in external API integrations, real-time messaging, and conversational automation with n8n.
- Engineered a workflow using n8n to automate updates to Google Docs via AI-generated content, connecting LLM outputs directly to Google Docs for streamlined document management, illustrating advanced skills in SaaS automation, OAuth2 integrations, and document workflow enhancement.
- Expertly utilized n8n's scheduling, filtering, branching, and conditional logic nodes across multiple projects to orchestrate complex multi-step automations, including file handling, RESTful triggers, and external service authentication, demonstrating

hands-on expertise in scalable workflow design and practical implementation of n8n in production environments.

PROFESSIONAL EXPERIENCE

Associate Principal, **Tiger Analytics India Consulting Pvt. Ltd.**, Chennai

Nov '21 – Present

- Built a MLOps framework for predicting the optimal product price and maximizing the profit for a luxury retail client
- Engineered a scalable ML pipeline for AI price generation which leads to faster implementation across geographies
- Implemented ML model experiment tracking using MLflow for auditing, tracking and model comparison.
- Developed model monitoring framework for capturing the model degradation and data drift to auto train the model.
- Implemented CI/CD for ML models using AWS CodePipeline for accelerated, regular releases, and issue resolution.
- Spearheaded the architecture and deployment of an LLM-based Streamlit application, in both AWS and Azure platforms.
- Conceptualized and developed a backend solution architecture in Azure for Document Search and Summarization (RAG).
- Engineered a websocket API for an LLM chat application, leveraging AWS services to extract insights (both text and plot) from Snowflake tables in response to user queries, and seamlessly integrated this with a React application.
- Developed and led to an end-to-end solution for a fashion retail client to process and enrich product details, utilizing Kafka events, Azure Durable Functions, and Google Gemini LLM with automated CI/CD.
- Spearheaded design & delivery of a global pricing analytics platform across 20+ international markets by deploying scalable ML pipelines in Azure ADF + Databricks to generate SKU-level elasticity and promotional insights

AVP-Data Science, **Goals101 Data Solutions Pvt. Ltd.**, New Delhi

Apr '19 – Nov '21

- Built a customer propensity model that improved brands **offer lift by 30%** for customers who were likely to transact
- Deployed a recommendation engine (**ALS**) for getting the new to subcategory customers based on customer similarity
- Designed a prediction store for managing models and saving model artifacts that reduced the segmentation workflow **run time** for an offer by **50%** and resulted in saving infrastructure cost up to **24L YoY**
- Created feature lake - a central repository for managing features, which helped in reducing cost per model, faster time to market new models, and enhanced scalability, sharing, and reusing of features
- Developed an anomaly detection framework, captured 90% of the missing and outlier in transaction data on a daily basis

Consultant, **Deloitte Consulting India Pvt. Ltd.**, Gurugram

Jun '17 – Apr '19

- Analyzed **120k patient's** data to build predictive model for detection, diagnosis, treatment, and management of diseases
- Predicted the likelihood that patients will develop chronic disease and present patient-specific prevention interventions
- Achieved improvement in the ability to admit patients with complex medical conditions, to enable saving of \$1.2M YoY
- Performed dimensionality reduction by calculating the relative importance of the variable and handled imbalanced data

Analyst, **Invesco Ltd.**, Hyderabad

Nov '16 – May '17

- Designed a predictive algorithm to improve investment decisions and profit by analyzing the behavior of past investment
- Predicted the future performance and risk of securities based on the historical trading performance
- Enhanced the **operational efficiency** by identifying the key risks factors and forecasting investment viability

Senior Developer, **HCL Technologies Ltd.**, Hyderabad

Oct '15 – Oct '16

- Predicted the optimal price of drugs based on the drug performance, effectiveness and competition to make it affordable
- Analyzed source data to assess data quality & determined the strategies for handling the identified 7 data anomalies
- Boosted the drugs net **sales by 17%** through reference pricing and increased the market share and **revenue by 22%**
- Refined data visualization (statistical graphs & dashboards) to enhance decision-making, accessibility & insights.

Data Specialist, **IBM India Pvt. Ltd.**, Hyderabad

Mar '13 – Oct '15

- Improved marketing, sales and service effectiveness by creating a customer master solution for **five countries**
- Developed PL/SQL packages, stored procedures, and views and implemented best practices for optimal performance
- **Reduced costs by 20%**, complexity, and redundancies of data collection and aggregation by centralizing storage
- Conceptualized data validation rules and developed custom Java code to incorporate the business requirements

EDUCATION

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| • PG Diploma in Data Science International Institute of Information Technology, Bangalore 3.7/4.0 | Jul '17 – Jul '18 |
| • B.Tech.- Computer Science Gautam Buddh Technical University, Lucknow 71.72% | Aug '08 – Jul '12 |