Dhiraj Patra
AI Agents LLM Data Engineering Lead | GenAI | Cloud Architect

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PROFESSIONAL SUMMARY
- AI Engineer with 28+ years experience building production-grade AI/ML and Generative AI systems
- Expertise in LLMs, Agents, MCP, RAG pipelines, AI agents, and multi-agent orchestration (LangChain, LangGraph)
- Hands-on in end-to-end ML lifecycle: data → modeling → deployment → monitoring (MLOps/LLMOps)
- Strong background in cloud-native AI systems (AWS, Azure, GCP) and distributed architectures
- Built scalable AI systems across finance, healthcare, IoT, and real-time analytics

CORE SKILLS
- LLMs, Generative AI, RAG, AI Agents, LangChain, LangGraph, Prompt Engineering, Fine-tuning (LoRA), Embeddings, Vector Databases (FAISS, Pinecone, Weaviate), MCP, Multi-Agent Systems
- Python, PyTorch, TensorFlow, Scikit-learn
- MLOps, LLMOps, MLflow, CI/CD, Model Monitoring
- AWS, Azure, GCP, Serverless, Kubernetes, Docker
- Databricks, Spark, Kafka, Snowflake
- FastAPI, Flask, Django, REST APIs

Key Achievements
- Architected production-grade real-time multi-agent workflows for enterprise risk analytics with tool usage and memory for BNY Mellon
- LLM Fine-Tuning (HuggingFace, LoRA) at domain-specific LLMs for financial and compliance use cases
- Patent holder for AI/ML innovation in renewable energy
- Built enterprise cloud-native and multi-agent platforms at scale
- Delivered AI solutions across finance, healthcare, IoT, and e-commerce
- Implemented serverless, edge AI, and high-availability architectures for Fortune 500 firms

Professional Experience
Senior Project Manager (AI Risk Tech) — EY (for BNY Mellon) | 2024–Present
- Leading AI-augmented enterprise risk platforms using GenAI, agentic AI, and advanced analytics on Azure
- Delivering real-time risk analytics, backtesting, and decision intelligence systems
- Mentoring cross-functional teams to productionize AI securely at scale

Staff Software Architect — FTC Solar | 2021–2023
- Led AI/ML, EDGE IoT, and cloud innovation initiatives
- Developed patented AI solution and architecture for flagship products
- Built scalable OTA-enabled platforms for industrial systems

Technical Architect — Accion Labs | 2020–2021
- Architected serverless AWS platforms for video analytics and medical imaging AI
- Designed microservices-based AI systems using deep learning for diagnostic insights

Technical Architect — Impelsys | 2018–2020
• Modernized legacy LMS into scalable AWS microservices platform
• Enabled rapid team scaling and improved performance dramatically

Technical Architect — Mobilution | 2017–2018

• Delivered ML-powered e-commerce solutions using Python and microservices

Technical Architect (Contract) — Multiple Clients | 2016–2017

• Built cloud-based ERP and commerce platforms on AWS

Technical Architect Engineering — Rappier | 2015–2016

• Architected cloud platform and mobile backend for startup product

• Delivered scalable infrastructure enabling rapid growth

Technical Leader — MCS Solutions | 2013–2015

• Delivered IoT-based smart building applications on AWS

• Provided onsite leadership in Europe and offshore coordination

Technical Leader — SagarSoft India Ltd | 2011–2013

• Led development of medical analytics dashboard applications

• Managed open-source engineering teams

Chief Architect / Founder — ICTSTUDIO | 2010–2011

• Founded consulting firm delivering web and enterprise solutions

• Led international teams across Europe and India

Earlier Roles — Technical Architect / Leader / Entrepreneur | 2007–2010
• Delivered cloud, e-commerce, ERP, IoT, and analytics platforms across global clients

Technical Skills
AI/GenAI: LLM fine-tuning, RAG, Databricks certified data engineer, LangChain/LangGraph,

multi-agent systems, NLP, computer vision

ML/DL: PyTorch, TensorFlow, Keras, Scikit-learn, time-series, predictive modeling

Cloud: AWS, Azure, GCP, serverless, microservices, distributed systems

DevOps/MLOps: Docker, Kubernetes, CI/CD, MLflow, monitoring, governance

Data: Spark, Databricks, Snowflake, Kafka, real-time pipelines

IoT & Edge: EDGE AI, SCADA, MQTT, robotics

Education & Certifications
Master of Computer Applications — IGNOU

Advanced AI/ML & Cloud Diplomas & Certifications — IITs, Vaderbilt Univ, UCI, Stanford
Univ, Duke Univ, Google, Microsoft, John Hopkins Univ, Open Univ, BNY, Linux, Coursera and
more.

Leadership & Professional Engagement
Ownership-driven leader focused on product outcomes, mentoring teams, and driving innovation.
Active participant in developer communities including Google Developer groups.