

Ashish Pal

Engineering Manager - AI/ML | AI Systems Architect | Agentic & GenAI

10+ years building and operating production-grade AI systems across telecom, healthcare, and enterprise SaaS. Specialized in LLM-based, hybrid ML architectures, agentic workflows, and cloud-native MLOps at scale.

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EXPERIENCE

Twilio, Bangalore — Engineering Manager AI/ML

Jan 2026 - PRESENT

1. Lead and mentor a 7+ member **Machine Learning engineering** team, driving delivery across multiple ML and Gen AI initiatives.
2. Own **quarterly planning, roadmap definition**, and execution, aligning ML strategy with business goals.
3. **Scale and expand the team** through hiring, onboarding, and capability development.
4. Partnered with **product, security, and infra teams** to ensure enterprise-grade reliability, data privacy, and regulatory compliance.

Twilio, Bangalore — Staff Machine Learning Engineer

Aug 2021 - Jan 2026

1. Architected and owned end-to-end AI systems for [Twilio's Fraud Guard](#) platform, protecting global messaging traffic and delivering \$30M+ annual revenue savings through real-time fraud prevention.
2. Build and scale real time sms classification model for [Compliance Toolkit](#) offering for messaging customers providing compliance and delivering \$1M+ annual revenue.
3. Designed hybrid AI architectures combining LLM-based reasoning, NLP classifiers, and rule-based systems to optimize accuracy, latency, and cost at enterprise scale.
5. Acted as a playing coach for senior ML engineers: reviewed architecture, pair-coded on complex issues, and set engineering best practices across teams.
6. Drove cloud-native **MLOps** adoption using AWS SageMaker, MLflow, Docker, and Kubernetes for scalable, compliant deployments.

Tools -

Data Science - Numpy, Pandas, Sklearn, JupyterNotebook, Excel, Tableau

Deep Learning- Tensorflow, Keras, Pytorch, Pyspark

MLOPs- Mlflow, Sagemaker, DataBricks, DynamoDB, Elasticsearch, Docker, Kubernetes

TECHNICAL SKILLS

AI Systems Architecture
Agentic AI (LangChain, LangGraph, CrewAI)

LLMs & RAG · Hybrid ML
(GenAI + Classical Models)
Production MLOps

Observability & Reliability
Distributed Systems
Cloud-Native AI (AWS)

Security & Compliance
Technical Leadership

Leadership SKILLS

Project management, Product management, communication, Storytelling, Agile

Agentic AI & Generative Systems

- Designed and deployed LLM-based agent workflows using LangChain-style abstractions
- Built stateful AI services with guardrails, retries, and fallback strategies
- Experience handling non-determinism, hallucination control, and cost optimization
- Integrated GenAI with classical ML models for enterprise decision systems

AI - AWS Sagemaker, LLM, ChatGpt, AWS Bedrock, Langchain

Philips, Bangalore — Research Data Scientist

Dec 2019 - Aug 2021

1. Designed and deployed deep learning pipelines for automated cardiac MRI segmentation, achieving ~90% clinical-grade accuracy and enabling scalable AI-assisted diagnostics.
2. Built end-to-end ML workflows covering data ingestion, training, validation, and deployment within Philips' regulated healthcare ecosystem.
3. Led adoption of internal AI platforms to enable reusable ML components across teams, reducing time-to-production for new use cases.
4. Collaborated with global stakeholders to translate research prototypes into production-ready AI services.

Data Science - Numpy, Pandas, Sklearn, JupyterNotebook, Excel, Tableau

Deep Learning- Tensorflow, Keras, Pytorch, Pyspark

Siemens, Bangalore — Data Scientist

May 2018 - Dec 2019

1. Developed enterprise-scale predictive systems for supply chain forecasting (97% accuracy), supporting mission-critical business planning.
2. Built NLP-based defect classification and RCA systems, reducing software and device defects by ~50%.
3. Implemented log analysis pipelines for predictive maintenance, improving system reliability and uptime.

Data Science - Numpy, Pandas, Sklearn, JupyterNotebook, Excel, Tableau

Deep Learning- Tensorflow, Keras, Pytorch, Pyspark

Accenture, Bangalore — Data Analyst

March 2016 - April 2018

Delivered ML-driven merchandising and assortment planning systems for global retail clients, improving profitability by ~10%.

Data Science - Numpy, Pandas, Sklearn, JupyterNotebook, Excel, Tableau

EDUCATION

Illinois Institute of Technology — PGP, BigData & ML

Aug 2018 - Aug 2019

Rajasthan Technical University, India — B.Tech

Aug 2011 - July 2015.

AWARDS

Twilio Owl and Super Owl
Award 2025

AWS Hackathon Award 25

Fraud Guard solution PATENT.

Best Innovative Solution for
Philips Marketing team.

Patient digital twin as best
innovative solution.

Certification

Tensorflow in Practice
Specialization - Coursera
Certification

Deep learning - NPTEL
Certification

ATA 2.0 (Accenture
Technology Academy) - MIT.