

Shubh Pathak

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portfolio/ShubhOS | github.com/shubh0614

Summary

AI Engineer at UBS with over 2 years building production ML pipelines and LLM systems for Investment Banking. Spearheaded a generative AI compliance-review platform processing 8,000+ documents monthly using Azure OpenAI, hybrid rule-LLM architectures, and async multi-threading. Collaborated with compliance and engineering stakeholders to deliver ML-driven automation across Investment Banking and Technology Services. Certified Azure AI Engineer (AI-102), Azure Data Scientist (DP-100), and TensorFlow Developer (Google).

Experience

UBS

Pune, India

AI Engineer

Nov 2025 – Present

- Led development of a generative AI compliance platform that eliminated 200+ hours of monthly manual review for a 6-person compliance team, processing 8,000+ Investment Banking documents monthly via two Python engines: a document engine (PDF, PPT, DOCX) with Azure OpenAI vision checks and a commentary engine for emails using grouped LLM prompt execution
- Devised a contextual routing strategy to solve an M x N scaling problem, cutting API calls by 67% and compute token cost by 45% by directing document chunks only to relevant compliance checks based on task complexity
- Engineered async multi-threading via ThreadPoolExecutor for parallel document parsing and model inference, slashing end-to-end pipeline latency by 70%
- Presented compliance KRI dashboards to Investment Bank leadership, translating real-time breach monitoring data into executive-ready insights; collaborated with compliance and risk teams to define check logic and KRI frameworks

ML Engineer and Data Analyst

Aug 2024 – Oct 2025

- Owned end-to-end development of a predictive ML model that automated approval and rejection decisions for 4,000+ IT infrastructure tickets annually, trained on historical virtual server utilization data covering CPU, memory, and disk metrics
- Compressed hardware approval cycles from 14 days to under 3 days by integrating telemetry from 85+ enterprise systems and deploying rule-based recommendation logic in PostgreSQL
- Decreased manual data-gathering effort by 40% by architecting the INSPIRE dashboard in Power BI, integrating datasets from 80+ enterprise systems into a unified infrastructure view
- Shipped the Solution Designer Studio in collaboration with business users, enabling cross-functional teams to accelerate infrastructure assessment cycles by 60% through custom reusable Power BI reports built with personalized visuals

Data Analyst Intern

Jan 2024 – Jul 2024

- Shrank mean-time-to-resolution from 2-3 days to under 6 hours by designing a Power BI failure-monitoring dashboard segmented by region, data source, and failure type
- Drove migration of compliance reporting from Tableau to Power BI by automating Azure Data Factory ETL pipelines loading BigID scan outputs into MS SQL

Projects

Ada – AutoML Agent | *Python, LangGraph, FastAPI, React, OpenAI API* | github.com/shubh0614/ADA-MLFlow

- Architected a 9-agent LangGraph AutoML platform that automates the full ML workflow from data profiling to model deployment; shipped a FastAPI and React web UI, GitLab CI/CD pipeline integration, human-in-the-loop approval gate, and self-correcting LLM code execution with auto-retry on failure

Technical Skills

Machine Learning and AI: Python, TensorFlow, PyTorch, Azure OpenAI, LLMs, NLP, RAG, Prompt Engineering, LangGraph, Model Orchestration, Deep Learning

Data Engineering and Cloud: Azure Data Factory, PostgreSQL, MS SQL, pandas, PyMuPDF, openpyxl, Azure, AWS, FastAPI, Git, Power BI, Tableau, Stakeholder Management

Certifications

Microsoft Certified: Azure AI Engineer Associate (AI-102)	Microsoft, 2024
Microsoft Certified: Azure Data Scientist Associate (DP-100)	Microsoft, 2024
TensorFlow Developer Certificate	Google, 2024
Microsoft Certified: Fabric Analytics Engineer Associate (DP-600)	Microsoft, 2025

Education

Vellore Institute of Technology

Bhopal, India

Bachelor of Technology, Computer Science

Oct 2020 – Oct 2024

- GPA: 8.70 / 10.00