

Mayukh Mukhopadhyay

Cloud Architect & Gen AI Professional

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Professional Summary

Results-driven Solutions Architect with 15+ years of experience in solving business continuity and migration challenges using scalable AI-Prompt patterns, end-to-end solution designs, and revenue assurance tools. Successfully improved legacy data pipelines, reduced revenue leakage, and streamlined data lineage. Strong background in migrating legacy solutions from on-prem and Hadoop to Google Cloud under strict data compliance using medallion architecture.

Core Skills

- **Programming & AI Frameworks:** Python, SQL, Hive, Pig, LangChain, n8n, crewAI, M365 co-pilot
- **GenAI & NLP:** LLM Orchestration, RAG Pipelines, Vector Databases, Topic Modeling, Prompt Engineering, Fine Tuning Strategies
- **Architecture & Cloud Platforms:** GCP BigQuery, Cloud Spanner, Vertex AI
- **MLOps & Deployment:** Sqoop, Airflow, CI/CD Pipelines, Cloud Composer, Gitlab, Terraform, FastAPI, Streamlit, Ollama
- **Big-Data & Analytics Tools:** Clouder Hue, Looker Studio, Mobelium RAID, OBIEE
- **Governance & Compliance:** GDPR, EU AI Act, BASEL Frameworks, TMForum eTOM, Responsible AI Practices
- **Data Modeling & Data Lineage:** CA Erwin, Collibra
- **Agile Management:** Confluence, Jira, Scrum, & Kanban

Professional Experience

Solutions Architect Specialist (under TCS-BT Third-Party Vendor Contract) Jul 2010 – Present

BT Group, Group Business Assurance Tribe, GCP Squad

- Designed GenAI-assisted explainable prompt patterns to migrate 100K+ lines of Hive code into Google BigQuery, accelerating delivery timeline by 75% (12 to 3 months), reducing operational costs by 20%, and boosting pipeline performance by 36% through modernization from Oozie to Airflow.
- Implemented Market Basket Analysis for BT fleet inventory, optimizing stock management and reducing stockouts by 22%, while lowering holding costs by 15%
- Designed end-to-end solution for BT Ireland's billing and payments migration during Super Fiber Group acquisition, coordinating stakeholders to deliver in 10 weeks, using GenAI Copilot for data lineage and PII detection, preventing £1.25M revenue leakage and ensuring 100% compliance.

Assistant Consultant Apr 2010 – Present

Tata Consultancy Services (TCS), Communication Media Information (CMI) Vertical

- Generated steady offshore revenue of £40K per quarter (increased to £60K, +50%) for last 48 months during a major digital transformation, sustaining a 5-member team and ensuring 100% delivery continuity despite regular embargos using kanban-based workflow.
- Served as TCS-appointed Expert Evaluator for Ministry of Education and Narcotics Control Bureau, screening 150+ blockchain projects in 14 days; developed GenAI-based project evaluation framework for crypto fraud detection student-projects, delivering 100% justified and auditable decisions.
- Designed GenAI-driven google-sheet-based work-order estimation model, cutting inflight story migration cost by 85%, boosting user satisfaction 56% YoY, ensuring transparency, and modernizing ETL to medallion architecture.

Education

Executive Doctoral Program in Management 2022-Present

Indian Institute of Management Indore

Master of Business Administration 2018-2021

Indian Institute of Technology Kharagpur

Master of Engineering (Software Engineering) 2014-2016

Jadavpur University

Bachelor of Technology (Electronics and Communications Engineering) 2005-2009

Techno India College of Technology

Certification

- Google Professional Machine Learning Engineer 2025
- Google Professional Cloud Architect 2025
- Oracle Cloud Gen AI Professional 2024
- Microsoft Azure Solutions Architect 2021
- Microsoft Azure AI Engineer Associate 2020
- Professional Scrum Master I 2019

Projects and Publications

Ethereum Smart Contract Development (Packt UK)

- Authored a book on Smart Contracts with focus on Ethereum Blockchain which has clocked over 120+ citations and 20K+ GBP in sales since 2018. Has been cataloged by all Ivy League US Libraries, including the Royal Danish Library. (Solidity, Python, EVM).

Revise and Resubmit - The Mayukh Show (Available over Spotify, YouTube, Apple Music, and Amazon Prime Music)

- Deployed AI-Assisted Long-form Podcast Channel to discuss Management Research. It has grown organically to 230+ subscribers on Youtube and 50+ Subscribers on Spotify with a listener base of 75+ countries and 36% repeat audience. Featured by the FT-50 listed Journal of Management Studies and Bloomsbury Publication on X and LinkedIn. (NotebookLM, CapCut, and Perplexity AI)

Thought-Leadership Articles in GenAI and Finance

- Authored Review Essay on Hydrodynamics of Market that got published in Quantitative Finance, an ABS-3 Finance Journal.
- Authored Case-Study titled Be My AI on Danish Startup BeMyEyes in JITTC, an ABS-1 Journal.
- Authored Multiple General Audience Article on EU AI Act, Danske Bank History, and EUDI Wallet that got published by InsiderFinance Wire accumulating over 200+ claps per article.

Awards and Appreciations

- McKinsey Forward Program Graduate 2025, a highly selective 12-week program for mid-career consultants to train them in structured problem solving
- Conflict Management Division Travel Award, Academy of Management (85th AOM Annual Meeting 2025 at Copenhagen)
- Outstanding Performer for Data Analytics - CMF HaaS to GCP Migration (2025 BT and TCS)
- Best Paper Award for Threat Typology in Metaverse under Innovation and Entrepreneurship Track (9th FIIB Research Conference 2024)
- Best Conference Paper Award for B2B Subscription Commerce in Digital Ecosystems (13th CERE 2023 at IIM Indore)