Subhadip Mitra

Engineering Leader & AI Systems Architect

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Professional Summary

Senior Engineering Leader with 15+ years bridging AI research and enterprise delivery. Leading Google Cloud's Data & Analytics practice for Southeast Asia while driving innovations in LLM inference and multi-agent systems. Track record as "Player-Coach" - managing regional portfolios while architecting patented frameworks (UPIR, ARTEMIS, FTCS).

Professional Experience

Google Cloud - Professional Services Organization: Data & Analytics Manager — Site Lead, PSO Southeast Asia   *January 2021 – Present*

Built Google Cloud's Data Analytics practice across Southeast Asia. Dual role as Site Lead overseeing regional delivery and technical innovation lead on delta team.

- Built D&A practice from 0 to 1 serving 7 countries; direct $XXM+ portfolio with 97% CSAT
- Led strategic interventions for JAPAC accounts including major FSI and electronics manufacturers
- Delivered 12K+ user migrations, Data & AI CoEs, and petabyte-scale platform modernizations
- Published 5 technical disclosures (UPIR, FTCS, ARTEMIS, ETLC, CatchMe) on AI/distributed systems
- Won Google Cloud PSO Hackathon JAPAC for CatchMe intelligent trust engine

Standard Chartered Bank: Principal Engineer - Data & Analytics Transformation *January 2019 – January 2021*

Led enterprise AI and data platform development serving 11 markets and 1200+ users.

- Delivered Self-Service ML Platform reducing model development from 6 months to 1 week
- Designed credit risk AI models improving accuracy by 15% with alternative data sources
- Modernized MarTech infrastructure driving 30% increase in customer acquisition

Think Big Analytics (Teradata): Principal Data Engineer / Solution Architect   *January 2017 – January 2019*

Architected enterprise data solutions for Fortune 500 clients across APAC.

- Engineered 5 data lakes processing 1.2 PB/hour with 20% optimization
- Built real-time fraud detection reducing false positives by 60%

Various Companies: Software Engineering & Technical Consulting *January 2010 – January 2017*

Progressive roles in software development, systems integration, and consulting in financial services and algorithmic trading.

Research & Open Source Engineering

LLM Inference Efficiency
Speculative decoding, custom Triton kernels, KV-cache compression. 8.1x speedup, 88% peak bandwidth on A100.

GitHub: https://github.com/bassrehab/speculative-decoding
Google Technical Disclosure - Pending

AI Metacognition Toolkit
Activation-level detection of sandbagging and deception in LLMs. 90-96% accuracy with steering vectors.
PyPI: https://pypi.org/project/ai-metacognition-toolkit/

UPIR - Distributed Systems Synthesis
Neuro-symbolic framework for automated distributed system generation. 274x speedup, 60% latency reduction.
https://www.tdcommons.org/dpubs_series/8852/

CatchMe - Intelligent Trust Engine
Agentic AI for enterprise trust decisions. APLS pattern learning + cascade routing. 86% cost reduction, sub-50ms latency. JAPAC Hackathon Winner.

Google Technical Disclosures - Pending

Publications & Technical Disclosures

UPIR: Automated Synthesis and Verification of Distributed Systems
Google, Technical Disclosure Commons, November 2025
https://www.tdcommons.org/dpubs_series/8852/

ETLC: Context-First Data Processing for GenAI
Google Cloud, May 2025
https://services.google.com/fh/files/blogs/etlc_full_paper.pdf

Field-Theoretic Context System (FTCS)
Google, Technical Disclosure Commons, May 2025
https://www.tdcommons.org/dpubs_series/8022/

ARTEMIS - Adaptive Multi-agent Debate Framework
Google, Technical Disclosure Commons, January 2025
https://www.tdcommons.org/dpubs_series/7729/

OConsent: Blockchain Privacy & Consent Protocol
BITS Pilani / arXiv, December 2021
https://arxiv.org/abs/2201.01326

Education

MBA, Business Analytics BITS Pilani **MTech, Software Systems** BITS Pilani

Technical Skills

Leadership: Enterprise Architecture, Digital Transformation, AI & Data Strategy, C-Suite Advisory

Data & AI: Petabyte-Scale Platforms, Apache Spark/Kafka/Flink, LLMs & Multi-Agent Systems, RAG & Vector Databases, PyTorch, Vertex AI

Cloud & Engineering: Google Cloud Platform, BigQuery, Python/SQL/Scala, Kubernetes, Distributed Systems

Professional Affiliations

IEEE • ACM • Singapore Computer Society