# **Subhadip Mitra**

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github.com/bassrehab linkedin.com/in/subhadipmitra-in Technical leader and hands-on innovator with 15+ years architecting data and Al solutions across JAPAC's Financial Services, Telecom, and Technology sectors. Expertise in GenAl frameworks, cloud transformation, and billion-scale distributed systems.

Data & Al Strategy, Multi-Agent Systems, Enterprise Architecture, Cloud Transformation, Technical Leadership, GenAl, Python, Java

## PROFESSIONAL EXPERIENCE

Google Cloud - Professional Services Organization, Southeast Asia

Data & Analytics Manager | Site Lead, PSO Southeast Asia (2021-Present)

- Direct \$XXM Data Analytics delivery portfolio across JAPAC while overseeing \$XXM cross-practice delivery portfolio as Site Lead for Southeast Asia.
- Invented multiple technical frameworks including FTCS, ETLC, and ARTEMIS, advancing context processing and data integration for the Generative AI era.
- Led critical interventions across JAPAC, including a 7-week remediation for a major financial institution's
  Data Al transformation program (rescuing a \$XXM deal), stabilizing ETL clusters for a leading bank
  enabling regulatory-driven migration, and a rapid data transformation strategy for a global electronics
  leader, collectively safeguarding \$XXM in revenue.
- Executed high-value first-of-a-kind projects including analytics migrations, data monetization platforms, and AI centers of excellence.
- Built high-performing teams exceeding utilization targets through focused rapid upskilling in GenAl and cloud technologies.
- Spearheaded large-scale GenAl transformation program across 25 government agencies.
- Led \$XXM in strategic pursuits across JAPAC with a 40+ % win rate, converting major accounts across financial services, manufacturing, and retail sectors.

## Standard Chartered Bank, Singapore

Principal Engineer - Data & Analytics Transformation (2019-2021)

- Drove C-suite executives at the bank to invest in and champion a comprehensive transformation program.
   Personally designed, built, and delivered the Retail Bank's data and analytics platform spanning 11 key markets, integrating 800 batch/real-time source systems and supporting 1500 internal users, resulting in delivering \$XXM in annual operational cost savings.
- Led modernization initiatives driving Data & Analytics transformation, MarTech implementation, Digital channels' enhancement, cross-industry data sharing partnerships and Explainable AI systems while directly influencing C-suite technology investment decisions.
- Delivered Self-Service ML Platform reducing model deployment from 6 months to 1 week.
- Designed credit risk AI models with alternative data sources, improving accuracy by 15%.

## Think Big Analytics (Teradata), Singapore

## Principal Data Engineer / Solution Architect (2017-2019)

- Designed and developed grounds up 5 Data Lakes across the globe, with highly scalable ETL pipelines serving data volumes of up to 1.2 PB per hour and 40K daily files
- Engineered the low latency real time in-memory platform, processing over 2.5 million events/sec
- Built real-time fraud detection systems, reducing false positives by 60% and saving \$XXM annually.

# UTU<sup>1</sup>, Singapore

## **Technical Lead (2016-2017)**

- Delivered high-performance payment systems with 99.99% uptime and sub-100ms latency.
- Defined technology roadmaps enabling market expansion into Thailand.

# Truckaurbus Marketplace<sup>2</sup>, India

## Founder & CTO (2014-2016)

- Scaled B2B digital marketplace across 15 cities with 25+ OEM partnerships.
- Led technical strategy and product development for auction and programmatic advertising platform.

Additional roles from 2010 - 2014 in Software Engineering and Technical Consulting.

#### **EDUCATION & CERTIFICATIONS**

- MBA, Business Analytics, BITS Pilani (2021-2023)
- M.Tech, Software Systems, BITS Pilani (2017-2020)
- Google Cloud Certified: Professional Cloud Architect, ML Engineer, Data Engineer (2022-2024)

## **PUBLICATIONS & INNOVATIONS**

- Field-Theoretic Context System (FTCS) A novel approach to context processing (Technical Disclosure<sup>3</sup>, 2025)
- ARTEMIS Adaptive Multi-agent Debate Framework (Technical Disclosure<sup>4</sup>, 2025)
- ETLC: A Context-First Approach to Data Processing in the Generative AI Era (Google Cloud Whitepaper<sup>5</sup>, 2025)
- Continuous Context Propagation System (Patent-pending, Google, 2025)
- Data Monetization Strategy<sup>6</sup> for Enterprises (2023)
- Open Location Proof<sup>7</sup> (OLP) Protocol & OConsent Protocol<sup>8</sup> (2021-2022)
- PyContext<sup>9</sup> Framework for building autonomous multi-agent systems & context management.

#### TECHNICAL EXPERTISE

- Leadership & Strategy: Enterprise Architecture, Technical Vision, Al & Data Strategy, C-Suite Advisory
- Data & AI: Multi-Agent Systems, LLMs, Data Mesh, RAG, Vector Databases, Data Governance
- Cloud & Infrastructure: GCP (BigQuery, Vertex AI, Spanner), Serverless, Microservices
- Engineering: Python, Java, SQL, Scala, High-Performance Computing, Distributed Systems

<sup>1</sup> https://utu.global

<sup>&</sup>lt;sup>2</sup> https://truckaurbus.com

<sup>&</sup>lt;sup>3</sup> https://www.tdcommons.org/dpubs\_series/8022/

<sup>&</sup>lt;sup>4</sup> https://www.tdcommons.org/dpubs\_series/7729/

<sup>&</sup>lt;sup>5</sup> https://services.google.com/fh/files/blogs/etlc\_full\_paper.pdf

<sup>6</sup> https://www.researchgate.net/publication/376557741\_Data\_Monetization\_Strategy\_for\_Enterprises

<sup>&</sup>lt;sup>7</sup> https://olpprotocol.com/

<sup>8</sup> https://oconsent.io/

<sup>9</sup> https://github.com/bassrehab/pycontext

## **RESEARCH INTERESTS**

- Multi-Agent Systems: Cooperative AI, Agent Communication Protocols, Emergent Behaviors, Multi-Agent Debate, Consensus Mechanisms, Agent Coordination
- **Privacy-Preserving AI:** Differential Privacy, Federated Learning, Multi-Party Computation, Homomorphic Encryption, Privacy-Utility Tradeoffs, Consent Management
- Advanced Computing Architectures: Quantum Computing, Neuromorphic Computing, Post-Quantum Cryptography, Approximate Computing, Non-Von Neumann Architectures
- Theoretical Foundations: Mathematical Modeling, Information Theory, Complex Systems, Probabilistic Methods, Distributed Consensus