

# SANTANU GHOSH

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## ENTERPRISE ARCHITECT @ TCS

PRE-SALES CONSULTING | ENTERPRISE ARCHITECT | DELIVERY MANAGEMENT | TEAM LEADERSHIP

### ■ PROFILE SYNOPSIS

AI & Cloud-Native Architect with **19+ years of global experience** designing and delivering large-scale architectures across **AI/ML, GenAI, and Telecom BSS/OSS**. Expertise in **end-to-end AI solutioning** – data pipelines, model development, **MLOps/LLMOps**, inference serving, and enterprise integration. Skilled in multi-cloud architectures (AWS, GCP, Azure), vector databases, RAG pipelines, LLM fine-tuning, and agentic AI frameworks. Proven track record in **CxO consulting, AI strategy alignment, and product integration**, with hands-on leadership in **multi-modal models, LangChain, and LangGraph-based orchestration**.

Core Competency
<ul style="list-style-type: none"><li><b>Industry Domain:</b> Telecom BSS/OSS, Utility, IOT, Industry4.0</li><li><b>Business Domain:</b> Marketplace, CRM, CPQ, Product Catalog (EPC), Order Management (COM/SOM), Billing/Online Charging (OCS), Revenue Assurance, Service Assurance, Device Management, Campaign Management and IR.</li><li><b>COTS/SaaS:</b> Ericsson CBiO (OCS, ECM, EOC, EDA, BSCS-iX, EMM), ServiceNow (SOMT, TSM, CSM, ITSM), Oracle RoDOD, Zuora, Aria, Billing Platform, Salesforce CPQ, TCS HOBS, MATRIX OCS.</li><li><b>AI/ML &amp; GenAI:</b> LLMs (GPT, Claude, LLaMA), Diffusion Models, Fine-tuning, Prompt Engineering, RAG, Agentic AI (LangChain, LangGraph), MLOps/LLMOps (ML Flow, Fiddler)</li><li><b>Cloud-Native Architectures:</b> AWS, GCP, Azure   Docker, Kubernetes   Microservices, Event-driven &amp; Serverless</li><li><b>Data Infrastructure:</b> Data Lakes, Warehouses, Graph DBs, Vector DBs (Pinecone, FAISS, Weaviate)   Kafka, Streaming</li><li><b>Programming &amp; Frameworks:</b> Python, REST/GraphQL APIs, TM Forum ODA, ITIL, TOGAF, Agile, SAE, DevSecOps</li><li><b>Governance &amp; Security:</b> Escalation Management, Risk Mitigation, ECOM/GDPR Compliance.</li><li><b>Leadership:</b> CxO Consulting, Architecture Governance, Team Mentorship, Pre-Sales Strategy</li></ul>

**Major Clients Worked:** **US** -> Verizon, T-Mobile. **UK/EU** -> British Telecom, VMO2, Telefonica Germany, Vodafone UK, VF Spain, Telia Sweden, Telia Norway, Telia Finland, Telenor Sweden, Proximus, Elisa, Azercell, Vyon **MEA** -> STC, DuTelecom, Airtel Africa(DRC, Gabon, Kenya, Nigeria), MTN (South Africa), BATELCO **APAC** -> Reliance Jio, Bharti Airtel, Citycell, GrameenPhone, Celcom, TrueCorp, Brunei. **ANZ** -> TPC, Telstra, Fiji-Telecom.

### ■ CERTIFICATIONS

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|--|---|
| 2025: ServiceNow PartnerSales: Gen AI+, Now Assist | 2024: Google Cloud Generative AI (E1-GenAI)           |
| 2024: AI/GenAI from IIT-Kharagpur – AI4ICPS(CoM)   | 2022: AWS Cloud Practitioner                          |
| 2018: Certified Scrum Master (CSM)                 | 2019: TM Forum BDM (eTOM – SID – TAM)                 |
| 2017: Microsoft Dynamics 365 Fundamentals          | 2016: ITIL & Scaled Agile Framework (SAFe) Foundation |

### ■ AWARDS & ACCOLADES

- |   |   |
|---|---|
| 2024: Top L&D Award (CMI) in TCS  | 2024: Published Article on Child Education in <a href="#">IndiaAI</a> (MeitY) |
| 2024: Evaluator for <a href="#">Skilled India Hackathon for AI/Gen-AI</a> ideation. | 2020: ROCK STAR Award for Multi-Country Delivery in Ericsson                  |
| 2020: ACE Award for Lead BSS Architect in Ericsson                                  | 2012: Best Year of Employee in UshaComm                                       |

### ■ PROFESSIONAL EXPERIENCE

Enterprise Architect - Consultant | Tata Consultancy Service (TCS), Kolkata | Jan 2023 – Present

- Architected AI Factory for leading Nordic Telco**, building a **Nvidia Centric GPUaaS platform** with integrated **IaaS, PaaS, SaaS** layers to support **AIOps, MLOps & LLMOps workflows**.
- Designed **GenAI-powered SDLC accelerator using Azure AI Copilot**, boosting **dev throughput by 28%** and defect resolution by **34%**.
- Implemented **RAG-based architecture** with knowledge graphs & embeddings for telecom catalog/order systems, enhancing search & recommendation accuracy.

- Led **multi-country BSS transformation** using **microservices (Apigee, TMF Open APIs, SID model)** hosted on cloud-native stack and **GitLab Duo** centric **Agentic DevSecOps**.
- Hands-on implementation of **TMF Open APIs** (TMF620 Product, TMF622 Ordering, TMF641 Service, TMF666 Account, TMF 678 Billing) on ServiceNow SOMT & ARIA through Apigee GW.
- Guided teams on **LangChain & LangGraph agentic workflows**, mentoring engineers in AI best practices and governance.
- Lead **Architect** from TCS team for **TM Forum Catalyst Project** - [Billing Hub-II Catalyst](#) and [AI-powered legacy modernization to ODA](#).
- Facilitated **CxO-level workshops** and led architecture governance across 5 countries.

#### Enterprise Architect – Senior Manager | Capgemini, Kolkata | Sept. 2021 – Jan 2023

- Defined Architecture blueprints with **Telia Norway & Sweden's B2X ecosystem**, connecting Salesforce CPQ, Ericsson ECM/EOC and Oracle BRM by leveraging TMF Open APIs.
- Defined E2E **ServiceNow ITSM workflows** across multiple Tier-1 telcos, harmonizing **order-to-activation journeys**.
- Delivered **Telia's B2X digital transformation**, aligning AI-driven portfolio with **CxO priorities**.
- Implemented **DevSecOps pipelines with CI/CD & observability**, enabling continuous ML deployment in cloud-native environments.
- Designed **predictive analytics solution using Splunk** to reduce fallout in **Oracle RxDOD** platform by **25%**, laying foundation for ML-based monitoring.
- Architected **policy & charging AI enhancements** for RTLS, DAAS, SD-WAN services.
- Managed a **50+ architect/engineering team**, ensuring architectural reviews & compliance with security and performance standards.

#### E2E Solution Architect | Ericsson, Kolkata | Oct. 2017 – Jul. 2021

- Designed **E2E architecture** for Airtel Africa's DBSS convergence (CS16 to EC20), delivering a unified charging and billing experience.
- Designed multi-country **AI-enabled BSS transformations** for Airtel Africa, Vodafone, Azercell, with predictive analytics improving SLA adherence by 18%.
- Implemented **data-driven mediation systems (online/offline)** for streaming telecom data into real-time assurance dashboards.
- Led pre-sales solutioning and **business case development for AI-enabled offerings**, securing **\$60M contracts**.
- Delivered Ericsson Online Charging(OCS), Billing (BSCS iX) , Mediation (EMM/OLM), CPQ, Catalog Manger (ECM), Order Management(EOC) and Provisioning (EMA/EDA) implementations for APAC and MMEA clients, reducing integration time by 35%.
- Managed pre-sales lifecycle from ideation to closure for leading Middle East Telco and influencing \$60M in contract awards.
- Lead Solution Designer of end-to-end solution to develop the solution blueprint including transformation roadmap for CBiO implementation.

### ■ EARLY CAREERS

#### Project Lead | Evolving Systems | July'2016 to October'2017

#### Manager, Solution Designer | Usha Martin Technologies (UshaComm) | October'2007 to July'2016

#### Software Developer | Magna Info Services | June'2006 to October'2007

### ■ ACADEMIC CREDENTIALS

- 2015: MBA (Distanced) from Sikkim Manipal University (SMU) in Project Management.
- 2006: B. TECH from WBUT in Electronic & Communication Engineering.
- 2002: XII (Class- 12th) from West Bengal Council of Higher Secondary Education
- 2000: X (Class-10th) from West Bengal Board of Secondary Education

### ■ PERSONAL DETAIL

- **Date of Birth:** 06th May, 1984
- **Contact No:** +91-9038400936 & +91-9163857231
- **Languages known:** Bengali, English, Hindi
- **Address:** RBM Tower, Flat-3C, Krishtanpara, Kestopur, Kolkata - 700102
- **Passport Details:** Z4303562 valid upto Jun-2027