

# Sunil Sarolkar

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## AI Architect | GenAI & LLMops Specialist | Financial Services Expert

**AI Architect & Engineering Leader** with **15+ years of experience** designing enterprise-scale AI/ML solutions for the Financial Services sector. Expertise in bridging the gap between technical execution and strategic stakeholder engagement. Proven track record of architecting **GenAI agents**, establishing **LLMops/MLOps frameworks**, and deploying cloud-native data platforms (GCP) processing **10B+ records**. Deep experience in **Responsible AI**, governance, and translating complex business requirements into scalable architectures.

## Core Skills

**GenAI & LLMops:** AgentOps, RAG Architectures, LangChain, Hugging Face, Vertex AI, Azure OpenAI, Prompt Engineering. **Strategic Architecture:** Solution Design, Technical Presales, Event-Driven Architecture, Responsible AI Governance. **Cloud & Data:** GCP (BigQuery, Dataflow), AWS, Kubernetes, Spark, Kafka, Airflow, Data Lakehouse. **Languages & Core:** Python (Expert), Java, PySpark, SQL, Financial Modeling.

## Professional Experience

**Assistant Vice President (Engineering Lead)** | *Deutsche Bank, Pune* | Jul 2015 – Present

- **Strategic Consulting (30%):** Acting as primary **Solution Architect** for internal business lines. Lead design workshops to define AI use cases, ROI analysis, and technical roadmaps for financial operations.
- **Enterprise GenAI Architecture:** Architected and deployed **GenAI Agents** for automated software testing using **LangChain and LLMs**, achieving a **60% reduction** in manual testing cycles. Defined the **AgentOps** framework for monitoring and retraining.
- **Scalable Data Foundation:** Designed cloud-native data architecture on **GCP** processing **10 billion+ records monthly**. Integrated ML pipelines directly with data lakes to enable near real-time inferencing.
- **MLOps & Governance:** Established engineering best practices for AI deployment, including containerization (Kubernetes), CI/CD (Jenkins/Git), and strict adherence to **Responsible AI** and data privacy standards.

## Software Engineer | Cognizant Technology Solutions | Dec 2013 – Jul 2015

- Built position management systems for global securities infrastructure, requiring deep understanding of capital markets data.

## Software Engineer | HSBC Software Development India | Aug 2011 – Dec 2013

- **Trading Platform Integration:** Integrated proprietary trading platform with DTCC and MarkitWire using **FIXML** for clearing and regulatory compliance.
- Built "Smart Client Framework" using Java/C#, enabling low-latency interactions between traders and stakeholders.

## KEY Projects

### Structform (Open Source, 2024)

- Architected a Transformer-based structured data transformation engine achieving **99% validation accuracy**; integrated automated SQL correction using LangChain + Hugging Face.

### AI-Driven Indian Sign Language Translation (IISc Capstone)

- Developed a real-time translation pipeline using **OpenPose** for skeletal keypoint extraction and **LSTM networks** for temporal gesture recognition. Deployed as an interactive web app on Hugging Face Spaces.

## Education & Certifications

- **PG Certification in Computational Data Science (CDS) – IISc Bangalore (2024):**  
Coursework included advanced topics in mathematical algorithms, probability analysis, and quantitative methods for data science, directly supporting financial modeling capabilities.
  - **AI-Driven Indian Sign Language Translation (IISc Capstone) | [Live Demo](#)**
  - Developed a real-time translation pipeline using OpenPose for skeletal keypoint extraction and Long Short-Term Memory (LSTM) networks for temporal gesture recognition. Deployed the inference engine as an interactive web application using **Streamlit** on **Hugging Face Spaces**, enabling real-time video translation.
- [Google Certified Professional Machine Learning Engineer Certification](#) – 2025
- [Google Certified Associate Cloud Engineer](#) – 2023
- Diploma in Advanced Computing (DAC) – ACTS, Pune (2007)
- B.E. Electronics – Pune University, VIT College (2006)