



Anirban Banerjee

Technical Architect, Data Engineer, Generative AI Practitioner
Redmond, WA, USA ✉ helloanirban@gmail.com 📞 (206) 466 9183
[LinkedIn](https://www.linkedin.com/in/abanerjee1985) - [linkedin.com/in/abanerjee1985](https://www.linkedin.com/in/abanerjee1985)

Accomplished Technical Architect & Data Engineer specializing in Retail & Healthcare. Expert in designing and delivering large-scale big data solutions, cloud migrations, and Generative AI applications. Proven leader in architecting end-to-end data platforms, optimizing cloud costs, and driving innovation using modern cloud and AI technologies.

Technical Skills

- Programming: Python, Spark, Scala, SQL
- Generative AI: OpenAI, Azure OpenAI, Langchain, LlamaIndex, HuggingFace, Vector DBs (Chroma, FAISS), Langflow, IBM WatsonX, Azure AI Foundry, Document Intelligence, AI Speech, AI Translator
- Cloud Platforms: Azure (Databricks ADB, Azure Data Factory ADF, DevOps, WebApp, Key Vault, Storage, Event Hub, Container, Monitor, Log Analytics, Logic App, Azure Fabric, AI Foundry), AWS (EMR, Glue, S3), GCP (BigQuery, DataProc, Cloud Storage), Confluent, Kafka
- Databases, Data Lakes: Azure Cosmos DB, MongoDB, Oracle, SQL Server, MySQL, DB2, Teradata, Dremio, Delta Lake
- DevOps & Source Control: GitHub, GitLab, Bitbucket, Azure Repos, Azure DevOps, Bicep, Git Action
- ITSM & Collaboration: ServiceNow, Jira, Rally, Confluence, SharePoint, Azure Boards
- Visualization Tool: Power BI
- Containerization & Orchestration: Docker, Kubernetes

Competitions & Hackathons

WatsonX Hackathon, Hosted by IBM (May 2024)

- Developed a Generative AI solution using the IBM WatsonX platform as part of a competitive hackathon and solution considered for finalist spot IBM TechXchange Conference 2024.
GitHub - <https://github.com/meanirban100/IBM-Watsonx-Hackathon>
YouTube - <https://www.youtube.com/watch?v=sftaErGwO00>

AI Devs Competition, Hosted by Langflow (September 2024)

- Participated in an advanced AI development competition focused on building innovative solutions with Langflow.

Project Experience

LTIMindtree (Previously Mindtree)

Deloitte (July 2025 – Present)

Data Architect (Office of CIO)

To design and implement enterprise-level data architecture standards and solutions that support strategic, cross-business initiatives by enabling efficient, secure, and scalable data management across Deloitte's internal systems.

- **Future state architecture pattern** – Collaborating with Enterprise architect and designing the Future state architecture pattern on Data ingestion, Data Consumption, Visualization & reporting, AI/ML integration, Data marketplace across Deloitte ecosystem for US and Global entities.
- **Agent Integration Pattern** – Collaborate with different teams and design the integration pattern of AI Agents with existing datahub products (like MDM, Databricks, SAP product suite).
- **ABAC (Attribute based access control)** – Designing the attribute-based access control for M365 products along with other

Data architect.

- **Centralized Access Policy** – Developing the overarching guiding principles for centralized access policy application to which govern access based on the roles, job duty of the users across on-prem and cloud applications.

Premera Blue Cross - American Health Insurance Company (Sept 2024 – June 2025)

Technical Architect/Data Engineer

- **Client-Centric Solution Architecture:** Partnered directly with clients to translate business requirements into scalable technical solutions, ensuring alignment with organizational objectives and future growth.
- **Seamless IT Integration:** Collaborated with enterprise architects to evaluate current IT ecosystems and design integrated products, enabling frictionless interoperability across platforms.
- **Security & Compliance:** Worked closely with security teams to implement robust security frameworks, achieving compliance with industry regulations and internal standards.
- **Data Governance Modernization:** Architected and deployed Unity Catalog for DataHub, defining catalog structures, streamlining data integration, and establishing governance and access policies for enhanced data security.
- **Accelerated Cloud Migration:** Led the migration from Boomi to Databricks by developing a reusable migration framework, reducing application transition timelines and minimizing operational disruption.
- **Real-Time Monitoring Enablement:** Integrated ServiceNow and Dynatrace with DataHub applications, delivering real-time error monitoring and significantly improving incident response times.
- **Lakehouse Architecture Implementation:** Designed and optimized lakehouse architectures, leveraging advanced data management strategies to reduce compute and storage costs while maximizing performance.
- **Cross-Functional Delivery Excellence:** Orchestrated collaboration among DevOps, data engineering, and product teams to ensure timely, high-quality project delivery.
- **Performance Optimization:** Enhanced batch and streaming data workflows, delivering substantial efficiency improvements and measurable gains in processing speed.
- **Technical Mentorship:** Provided strategic guidance and mentorship to team members, fostering adherence to architectural best practices and driving continuous improvement.

UHG/Optum - American Healthcare Company (July 2022 to Aug 2024)

Technical Architect/Data Engineer

- **Gen AI Solution Design:** Architected a generative AI chatbot leveraging Azure OpenAI, Bot Framework, and vector databases, enhancing customer engagement through natural language processing and contextual response generation.
- **ETL Modernization:** Redesigned legacy ETL pipelines using a rules engine and file forecasting framework, improving data processing efficiency by 40% and reducing latency for critical business workflows.
- **Cloud Migration:** Spearheaded migration of Ab Initio/Netezza-based ETL systems to Azure, achieving greater uptime and 76% reduction in operational costs.
- **Cost Optimization:** Reduced Databricks costs by 37% and Azure storage by 42% by implementing the best practices.

Tata Consultancy Services (TCS)

CVS - American Healthcare Company (Mar 2022 to June 2024)

Data Engineer, Tech Lead

- **Regulatory Compliance Automation:** Engineered and enforced CMS guidelines within Google Cloud Platform (GCP), ensuring secure and compliant cloud operations.
- **Public Data Integration & Transformation:** Integrated diverse public datasets and executed complex data transformations, delivering enriched and actionable data assets.
- **Medallion Architecture Deployment:** Designed and implemented medallion architecture on GCP leveraging DataProc and BigQuery, optimizing data quality, scalability, and analytics performance.

Tata Digital - Indian Multinational Conglomerate (May 2020 to Mar 2022)

Data Engineer, Tech Lead

- **One-Click Sandbox Innovation:** Designed an automated Azure sandbox architecture enabling self-service data provisioning, reducing environment setup time from day to minutes for business ad-hoc analysis.
- **Multi-Source Data Integration:** Streamlined sandbox workflows by automating ingestion from diverse data sources (e.g., APIs, databases) and third-party systems.
- **Full-Stack Development Leadership:** Built web-based solutions using Django and Azure SDK, standardized CI/CD pipelines, and enforced coding practices, cutting deployment.
- **MLOps Scalability:** Productionized machine learning models via automated MLOps frameworks (monitoring, retraining, deployment), improving model iteration speed and reliability.

BJ's Wholesale Club – American Retailer (Jul 2019 – May 2020)

Data Engineer

- **Cloud Environment Modernization:** Upgraded Python and Spark environments on AWS EMR, leveraging the latest features and libraries to enhance cluster performance, stability, and long-term maintainability.
- **Codebase Optimization:** Spearheaded comprehensive code modernization and performance tuning initiatives, refactoring legacy scripts, optimizing resource utilization, and implementing best practices. Achieved significant improvements in job execution speed, reduced operational costs, and increased overall system reliability.
- **Continuous Improvement Enablement:** Established automated testing and monitoring pipelines to proactively identify performance bottlenecks and ensure seamless upgrades in future development cycles.

NBrown/J D Williams – UK Online Fashion Retailer (Jul 2017 – Jul 2019)

Support Lead

- **Technical Support Leadership:** Served as the support lead for internal credit maintenance applications, overseeing daily operations, incident resolution, and user support to ensure high system availability and reliability.
- **Stakeholder Collaboration:** Acted as the primary point of contact between end users, development teams, and business stakeholders, facilitating clear communication and swift resolution of technical issues.
- **Process Improvement:** Implemented proactive monitoring, streamlined support workflows, and developed knowledge base documentation, resulting in faster issue resolution and improved user satisfaction.

Kingfisher PLC - European Home improvement Retailer (Apr 2012 – Jul 2017)

Application Lead

- **Support & Development Lead:** Directed both development and support functions for enterprise applications built with Oracle PL/SQL and Oracle Forms, ensuring seamless integration of new features with ongoing system stability.
- **End-to-End Application Ownership:** Oversaw the full application lifecycle—from requirements gathering and design to deployment, maintenance, and incident management, delivering high-quality, reliable solutions for business-critical operations.
- **Team Leadership & Mentorship:** Led a cross-functional team of developers and support analysts, providing technical guidance, mentoring, and fostering a collaborative environment focused on continuous improvement.
- **Incident Management Excellence:** Implemented proactive monitoring, streamlined incident response processes, and established root cause analysis protocols, significantly reducing system downtime and improving user satisfaction.
- **Stakeholder Collaboration:** Acted as a key liaison between business users, IT teams, and management, ensuring clear communication, timely issue resolution, and alignment of technical solutions with business objectives.

Smart Bargains/Rue La La – American Online Fashion Retailer (Aug 2011 – Apr 2012)

Application Lead

- **Test Lead – Backend QA:** Directed backend testing and comprehensive QA planning for high-traffic e-commerce platforms, ensuring robust functionality and seamless user experiences.
- **Quality Assurance Strategy:** Developed and executed detailed test strategies, managed defect tracking, and drove continuous process improvements, resulting in enhanced platform reliability and faster release cycles.

Co-Op – UK Grocery Retailer Chain (Jun 2010 – Aug 2011)

Lead, Individual Contributor

- **Application Developer – Database Migration & Optimization:**
Led the successful migration of business-critical applications from SQL Server to Oracle, ensuring data integrity and minimal downtime throughout the transition process.
- **Backend Performance Enhancement:**
Optimized backend procedures and SQL queries during migration, leveraging Oracle-specific features to improve execution speed, scalability, and maintainability of database operations.
- **Cross-Functional Collaboration:**
Worked closely with business analysts, QA teams, and end users to validate migrated data, resolve compatibility issues, and ensure seamless application functionality post-migration.
- **Process Documentation & Knowledge Transfer:**
Developed comprehensive migration documentation and provided training to team members, facilitating smooth knowledge transfer and ongoing support for the new Oracle environment.

Target – American Retailer (Jun 2008 – Jun 2010)

Individual Contributor

- **Enterprise Application Development:** Designed, developed, and maintained robust business applications using Oracle PL/SQL, Java, and Oracle Forms, delivering scalable solutions for critical organizational needs.
- **Database & UI Optimization:** Authored complex PL/SQL procedures and built intuitive Oracle Forms interfaces, optimizing data processing, user experience, and overall system performance.
- **Cross-Functional Collaboration & Support:** Collaborated with business analysts and QA teams to gather requirements, troubleshoot issues, and ensure high-quality, reliable application deployments.

Education

B. Tech, Information Technology, Haldia Institute of Technology (WBUT) 2007, GPA 7.68

Professional Experience

- LTIMindtree (Previously Mindtree): Associate Principal – Architecture, November 2022 – Present
- Mindtree: Technical Architect, July 2022 – November 2022
- Tata Consultancy Services (TCS): Associate Consultant, February 2008 – June 2022

Certifications & Accreditations

- AB-731: Microsoft Certified: AI Transformation Leader
- AI-102: Azure AI Engineer Associate
- DP-420: Azure Cosmos DB Developer Specialty
- Dell GenAI Foundations
- Databricks Certified Generative AI Engineer Associate
- Databricks Academy Accreditation: Generative AI Fundamentals
- Databricks Certified Data Engineer Associate
- Databricks Certified Associate Developer for Apache Spark 3.0
- Databricks Lakehouse Fundamentals
- AZ-305: Designing Microsoft Azure Infrastructure Solutions
- AZ-104: Microsoft Azure Administrator
- DP-203: Data Engineering on Microsoft Azure
- AZ-204: Developing Solutions for Microsoft Azure
- DP-900: Microsoft Azure Data Fundamentals
- AI-900: Microsoft Azure AI Fundamentals
- AZ-900: Microsoft Azure Fundamentals
- Hacker Rank REST API Certification