

ARNAB BANERJEE

Kolkata, India

Email: arnab.banerjee.indra@gmail.com | Mobile: +91-9123790823

LinkedIn: <https://linkedin.com/in/arnab-banerjee-ai-architect>

GitHub: <https://github.com/arnab-banerjee-ai-architect>

Senior Technology Consultant | Master of Engineering (M.E.), Jadavpur University | Generative AI | LLM | Machine Learning | Python | Java | Azure | FastAPI | Enterprise Solutions | Solution Architecture

SUMMARY

Technology Professional with 16+ years of experience spanning Database Development, Enterprise Java Applications, System Integration, Analytics, and AI-powered Solutions. Extensive experience across Database Technologies, Enterprise Java Development, and AI-driven Solution Engineering with progressive expertise in Generative AI, LLMs, and Intelligent Automation.

Currently focused on Generative AI, Large Language Models (LLMs), Enterprise Search, Agentic AI, and AI-powered business solutions using Python, FastAPI, Azure, Dataverse, and Data Fabric. Experienced in designing scalable enterprise applications, integrating business systems, developing APIs, and delivering data-driven solutions that improve operational efficiency and business decision-making.

Strong background in solution design, stakeholder management, enterprise integration, and digital transformation with experience across telecom, finance, supply chain, analytics, and enterprise technology domains.

CORE COMPETENCIES

AI & Machine Learning

- Artificial Intelligence (AI)
- Machine Learning (ML)
- Generative AI
- Large Language Models (LLMs)
- Agentic AI
- Natural Language Processing (NLP)

Programming & Development

- Python
- Java
- FastAPI
- REST APIs

Microsoft Technologies & Cloud

- Microsoft Azure Services
- Microsoft Data Fabric
- Microsoft Dataverse
- AI Search (Azure AI Search)

Data & Analytics

- SQL

- Power BI

Enterprise Solutions

- Solution Architecture
- Enterprise Applications
- System Integration

Software Delivery

- Agile Delivery

PROJECTS (6)

1. LTIMindtree Limited

Project Name: Enterprise Knowledge Assistant Platform

Duration: Jan 2024 – Present

Role: Senior Technology Professional

Team Size: 7

Project Description

Designed and developed an AI-powered Enterprise Knowledge Assistant that enables business users to interact with enterprise knowledge through natural language queries. The platform leverages Large Language Models (LLMs), AI Search, Microsoft Dataverse, Microsoft Data Fabric, and Azure services to retrieve relevant enterprise information and generate context-aware responses. The solution supports workflow automation, enterprise search, API integration, request tracking, and business reporting.

Roles & Responsibilities

- Designed and developed REST APIs using Python and FastAPI.
- Integrated enterprise data sources using Microsoft Dataverse and Data Fabric.
- Implemented AI Search and LLM-based response generation workflows.
- Participated in solution architecture, deployment planning, and production support.
- Worked closely with business stakeholders and architects to translate business requirements into enterprise AI solutions.
- Supported Power BI integration for operational reporting and analytics.

Environment

Python, FastAPI, Azure, AI Search, Microsoft Dataverse, Microsoft Data Fabric, Power BI, REST APIs, Git, Azure Foundry, Data Fabric

2. Publicis Sapient

Project Name: Cloud Analytics Modernization Platform

Duration: Sep 2021 – Dec 2021

Role: Data & Analytics Consultant

Team Size: 5

Project Description

Contributed to cloud-based analytics modernization initiatives focused on improving enterprise reporting, data accessibility, and business intelligence. Designed scalable ETL pipelines and cloud-based data integration processes to support analytics and operational reporting.

Roles & Responsibilities

- Developed Python-based ETL pipelines.
- Built data transformation and ingestion workflows.
- Assisted with Google Cloud data migration activities.
- Improved data quality and reporting performance.
- Collaborated with business stakeholders to deliver analytics solutions.

Environment

Python, GCP, BigQuery, SQL, ETL

3. HCL Technologies

Project Name: Financial Analytics & NLP Automation Platform

Duration: Dec 2020 – Sep 2021

Role: Senior Technical Leader

Team Size: 5

Project Description

Developed enterprise automation and analytics solutions for financial operations using Java-based microservices and Natural Language Processing techniques. The platform automated business workflows, data processing, and analytical reporting.

Roles & Responsibilities

- Developed Java-based Microservices.
- Designed REST APIs for enterprise applications.
- Built NLP-driven text processing workflows.
- Integrated Kafka-based messaging services.
- Supported production deployment and performance optimization.

Environment

Java, Kafka, REST APIs, NLP, Microservices

4. ITC Infotech

Project Name: Supply Chain Operations Management Platform

Duration: Nov 2012 – Dec 2020

Role: Senior Software Engineer

Team Size: 7

Project Description

Designed and developed enterprise applications supporting supply chain and logistics operations. The platform streamlined inventory management, order processing, reporting, and enterprise system integration.

Roles & Responsibilities

- Developed Java and Python applications.
- Built integration services between enterprise systems.
- Developed reporting modules and business workflows.
- Performed application enhancements and production support.
- Optimized application performance and database operations.

Environment

Java, Python, SQL, REST APIs, Enterprise Integration

5. Bartronics

Project Name: Financial Data Processing System

Duration: Feb 2011 – Nov 2012

Role: Software Engineer

Team Size: 3

Project Description

Developed backend database applications supporting financial transaction processing, reporting, and operational data management.

Roles & Responsibilities

- Developed PL/SQL procedures and database components.
- Optimized SQL queries and reporting modules.
- Supported production issues and performance tuning.
- Participated in secure data exchange implementation.

Environment

Oracle, SQL Server, PL/SQL

6. Beas Consultancy

Project Name: Business Process Automation System

Duration: Dec 2008 – Feb 2010

Role: Software Developer

Team Size: 3

Project Description

Developed backend database applications and automation utilities supporting business operations, reporting, and data processing.

Roles & Responsibilities

- Developed PL/SQL procedures, packages, and triggers.
- Built Python utilities for data processing.
- Performed data validation and reporting.
- Supported production maintenance and issue resolution.

Environment

Oracle, PL/SQL, Python, SQL

PROFESSIONAL EXPERIENCE

1. LTM Limited

Senior AI Specialist | Dec 2021 – Present

Senior Technology Professional responsible for delivering enterprise applications, AI-powered business solutions, system integrations, and digital transformation initiatives for global clients. Involved in requirement analysis, solution design, API development, enterprise data integration, deployment planning, and stakeholder management.

Currently contributing to the development of an AI-powered Enterprise Knowledge Assistant platform leveraging Python, FastAPI, Azure Services, AI Search, Microsoft Dataverse, Data Fabric, and Large Language Models (LLMs). The solution enables users to retrieve enterprise knowledge through natural language interactions, combining business rules, enterprise data sources, semantic search, and AI-generated responses.

Key responsibilities include designing and developing APIs, implementing integration services, building AI workflows, managing enterprise data connectivity, and supporting deployment activities. Actively involved in enhancing intelligent search capabilities, workflow automation, request tracking, reporting integrations, and user experience improvements.

Collaborate closely with business stakeholders, architects, product teams, and developers to translate business requirements into scalable, secure, and maintainable enterprise solutions while driving innovation through AI and cloud technologies.

Technologies: Python, FastAPI, Azure, AI Search, Microsoft Dataverse, Data Fabric, LLMs, Power BI, REST APIs

2. Publicis Sapient

Data & Analytics Consultant | Sep 2021 – Dec 2021

Contributed to enterprise data modernization and cloud transformation initiatives, helping organizations improve data accessibility, reporting capabilities, and business decision-making processes. Worked closely with business stakeholders and technical teams to understand analytical requirements and deliver scalable data solutions.

Designed and implemented data ingestion, transformation, and integration pipelines to support enterprise reporting and analytics platforms. Participated in cloud-based data architecture initiatives, data quality improvements, and performance optimization activities to ensure reliable and efficient data processing.

Supported business intelligence and analytics programs by enabling timely access to trusted data, developing reporting datasets, and assisting in the implementation of data-driven solutions for operational and strategic decision-making.

Key Technologies: Python, Google Cloud Platform (GCP), BigQuery, ETL, Data Integration, Analytics, Business Intelligence

3. HCL Technologies Limited

Senior Technical Leader | Dec 2020 – Sep 2021

Contributed to the design and development of enterprise automation, analytics, and intelligent data processing solutions for business-critical applications. Worked closely with business stakeholders and development teams to deliver scalable, high-performance systems that improved operational efficiency and data-driven decision-making.

Designed and implemented NLP-based processing workflows to extract insights from structured and unstructured data sources, enabling automation of business processes and analytical reporting. Developed and enhanced Java-based microservices and integration components to support distributed enterprise applications and real-time data exchange.

Participated in the development of event-driven and messaging-based architectures, ensuring reliable data processing, system interoperability, and seamless integration across multiple enterprise platforms. Involved in solution design, development, testing, deployment support, and performance optimization activities.

Key Project: Financial Analytics & NLP Automation Platform

Key Technologies: Java, NLP, Kafka, Microservices, REST APIs, Enterprise Integration, Analytics Solutions

4. ITC Infotech India Ltd.

Senior Software Engineer | Nov 2012 – Dec 2020

Played a key role in the design, development, enhancement, and support of enterprise applications for supply chain, logistics, and business operations management. Worked closely with business users, functional teams, and technical stakeholders to deliver scalable solutions that improved operational efficiency, process visibility, and business performance.

Developed and maintained Java and Python-based applications, integration services, and reporting solutions to support critical business processes across the supply chain ecosystem. Participated in application modernization initiatives, workflow automation, system integration, and performance optimization activities to enhance reliability and user experience.

Contributed to the development of data processing and analytics capabilities, enabling better operational monitoring, reporting, and decision-making. Responsible for requirement analysis, solution implementation, testing, deployment support, and production issue resolution in a fast-paced enterprise environment.

Collaborated with cross-functional teams to streamline business processes, improve system interoperability, and deliver technology solutions aligned with organizational objectives and digital transformation goals.

Key Project: Supply Chain Operations Management Platform

Key Technologies: Java, Python, SQL, REST APIs, System Integration, Reporting Solutions, Enterprise Applications, Supply Chain Management

5. Bartronics India Ltd.

Software Engineer | Feb 2011 – Nov 2012

Worked on the development and support of enterprise financial applications with a focus on database-driven solutions, data processing, and business reporting systems. Contributed to the design, development, and maintenance of backend components supporting critical business operations and financial data management.

Developed database objects, stored procedures, queries, and data processing routines to ensure efficient handling of large volumes of transactional data. Participated in performance tuning, data validation, reporting enhancements, and production support activities to improve system reliability and operational efficiency.

Contributed to secure data exchange and information management initiatives, ensuring accurate processing, storage, and transmission of business-critical information. Worked closely with business and technical teams to analyze requirements, troubleshoot issues, and implement application enhancements.

Gained hands-on experience in enterprise database development, financial systems, data integration, performance optimization, and application support within a large-scale business environment.

Key Technologies: Oracle, SQL Server, PL/SQL, Database Development, Data Processing, Reporting Solutions, System Support

6. Beas Consultancy & Services

Software Developer | Dec 2008 – Feb 2010

Started my professional career as a Software Developer, contributing to the development and maintenance of database-driven business applications and operational support systems.

Worked on backend development, data processing, and reporting solutions to support day-to-day business operations.

Developed and maintained PL/SQL procedures, functions, packages, triggers, and database scripts to automate business processes, improve data accuracy, and enhance application performance. Participated in data extraction, transformation, validation, and reporting activities across multiple business applications.

Built automation utilities and data processing tools using Python to streamline operational workflows and reduce manual effort. Collaborated with business users and technical teams to understand requirements, implement enhancements, troubleshoot issues, and provide production support.

Gained a strong foundation in database development, SQL optimization, backend programming, data management, and software development best practices while working in a client-focused delivery environment.

Key Technologies: Oracle, PL/SQL, Python, SQL, Database Development, Data Processing, Reporting Solutions, Application Support

EDUCATION

1. Master of Engineering (M. E.)

Artificial Intelligence & Data Science

Department of Computer Science & Engineering

Jadavpur University

2. Bachelor of Engineering / Engineering Graduate

Computer Science & Engineering

West Bengal University of Technology

RESEARCH & AI WORK

LLM Safety and Detoxification Research

- Conducting research on Large Language Model safety.
- Working on model editing and toxicity reduction techniques.
- Exploring Generative AI, Agentic AI, and enterprise AI applications.

TECHNICAL SKILLS

Languages:

Java, Python, SQL

AI & ML:

LLM, NLP, Machine Learning, Generative AI

Frameworks:

FastAPI, REST APIs

Cloud:

Microsoft Azure, GCP

Data:

SQL Server, Oracle, Dataverse, Data Fabric

Reporting:

Power BI / Tableau

Tools:

Git, Agile, DevOps

ACHIEVEMENTS

- 16+ years of enterprise IT experience.
- AI-powered enterprise solution development.
- Enterprise integration and digital transformation delivery.
- Strong business and technical stakeholder management experience.

CAREER PREFERENCES**Preferred Roles**

- AI Solutions Architect
- Enterprise AI Consultant
- Solution Architect (AI & Integration)
- Technical Architect
- Lead AI Solutions Engineer
- Principal Consultant – AI & Enterprise Solutions

Preferred Location

1. Kolkata,
2. Remote