



# Amitabha Deb Barman

## Principal Azure Solution Architect

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Seasoned software engineering technology lead and solutions architect with over 14 years of diverse experience in software development and solutions. Demonstrated success in delivering impactful solutions across industries and geographies, including Australia, the United Kingdom, and India, while consulting for Tata Consultancy Services, a leading global system integrator.

## Professional Experience

### Senior Solution Architect, Microsoft Applications Tata Consultancy Services, Perth, Australia | May 2022 - Present

#### WEM Reform Program for Australia Energy Market Operator (AEMO) Current Position

- Lead a team of 20-30 professionals across onshore and offshore locations, overseeing the end-to-end software development lifecycle for critical business processes.
- Developed and implemented comprehensive solution architectures for custom software using Microsoft ASP.Net Core 6, Microsoft SQL Server 2019, Azure DevOps (CI/CD), RabbitMQ, VueJs, and Grafana technologies.
- Designed and implemented authentication and authorization patterns based on MTLS (Mutual TLS) and OAuth Bearer Token for enhanced security.
- Successfully launched the first phase of the solution on 1st Oct 2023, with ongoing development for the second phase.
- Documented Solution Architecture Document, including Executive Summary, Architecture Vision, Business Requirements, Technology Baseline, Architectural Strategy, System Architecture, Integration and Data Flow, Security Architecture, Infrastructure Architecture, Non-Functional Requirements, and Transition and Migration Plan with Contextual Diagram and Infrastructure model.
- Contributed to the creation of the Zone Diagram for the Security model, ensuring alignment with industry best practices.
- Implemented Git as the standard code repository and utilized Azure DevOps CI/CD as the deployment pattern, enhancing the manageability of the solution and codebase.

### Microsoft Azure Solution Architect Tata Consultancy Services, Melbourne (Australia) and Kolkata (India) | August 2019 - May 2022

#### Australia Energy Market Operator, NEM Market

- Led a team of approximately 20 members, coordinating efforts across onshore and offshore locations to deliver software solutions for business-critical processes in the NEM market.
- Designed the solution architecture for custom software development (Five Minutes Settlement) utilizing REST API, JSON, NodeJS, RabbitMQ, and Microsoft Azure Components including Azure Function App, Azure Active Directory, Cosmos DB, Azure KeyVault, Azure Storage Account, Virtual Network, ExpressRoute, Azure Managed Service Identity, Azure BLOB, and File Storage.
- Utilized REST API Swagger Definition for API documentation and created detailed technical designs using Confluence documents.
- Implemented MTLS (Mutual TLS) and Azure OAuth 2.0 pattern for Authentication and Authorization for the REST API.
- Implemented Git as the standard code repository and leveraged Azure DevOps CI/CD with Helm Chart and YAML pipeline for deployment, significantly improving the manageability of both the solution and codebase.

### BAU Support Lead, Click Software Application Tata Consultancy Services, Kolkata (India) and United Kingdom | November 2014 - August 2019

#### Scottish and Southern Energy

- Managed BAU (Business as Usual) support operations for the Click Software application, a field service tool for the Scottish and Southern Energy client.
- Responsible for both the Click Schedule and Click Mobile applications, ensuring their smooth functioning and addressing any issues or enhancements required.
- Completed the "Associate Consultant for ClickSchedule v8.x and ClickMobile v8.x" certification, demonstrating proficiency in the ClickSchedule and ClickMobile applications.

**Business-As-Usual (BAU) Support and Software Development** Tata Consultancy Services, Kolkata (India) and Melbourne (Australia) | March 2010 - November 2014

**AGL Energy, Australia**

- Supported and developed bespoke business applications for AGL Energy over a four-year period.
- Managed day-to-day activities utilizing various legacy systems, including Microsoft SharePoint, SQL Server 2008, SQL Server 2000, SQL Server 2005, .NET Framework, and Microsoft BI.
- Provided support for several Tier 1 and Tier 2 applications, ensuring smooth operation and addressing any issues that arose.
- Collaborated with stakeholders to understand business requirements and develop software solutions that met their needs.

## Education

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**Bachelor of Technology in Information Technology** Techno India College Of Technology, Kolkata, India | July 2005 - August 2009

**Master of Technology in Computer Engineering and application** Calcutta University, Kolkata, India | August 2019 - August 2022

## Key Skills

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- Azure DevOps, Azure Kubernetes Service (AKS), Azure Functions, Azure Cosmos DB, Azure Active Directory, Azure Key Vault, Azure Blob Storage, Azure Virtual Network, ExpressRoute, Azure Storage Account (Azure Blob, Azure Queue) and Azure SQL Database.
- CI/CD pipelines using Azure DevOps, Git, Helm Charts, and YAML pipelines to automate build, test, and deployment processes, improving efficiency and reliability
- Proficient in implementing security best practices on Azure, including Mutual TLS (MTLS), Azure OAuth 2.0, Managed Service Identity (MSI), and Role-Based Access Control (RBAC) Azure Service Principals.
- Skilled in a wide range of programming languages, including C#, .NET Core, Node.js, and PowerShell, with strong expertise in Microsoft SQL Server, REST API development, RabbitMQ, and scripting languages such as YAML and JSON.
- Proficient in Grafana for analytics and monitoring, with experience in ELK Stack (Elasticsearch, Logstash, Kibana) for log management and analysis.

## Certifications

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**Microsoft Azure Solution Architect Expert (AZ-303 and AZ-304) Expert** (Microsoft) | January 2021  
[learn.microsoft.com/en-us/credentials/ce...](https://learn.microsoft.com/en-us/credentials/ce...)

**Microsoft .NET Framework 2.0 - Application Development Foundation** (Microsoft) | May 2011

**ITIL 2011 Foundation Certificate in IT Service Management Certification**

**Associate Consultant for ClickSchedule v8.x and ClickMobile v8.x** (Click Software) | September 2015