

Shameel Ahmed Z

- Software Architect
- Automation & Tooling Champion
- Open-Source Enthusiast

- Cloud Migration Expert
- Database Expert
- Author, Writer, Blogger

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I'm a Software Architect with 24 years of experience designing and developing traditional and serverless distributed systems. I specialize in creating scalable, secure, and efficient solutions while mentoring teams to write clean, maintainable, and robust code. Over the years, I've had the privilege of contributing to the tech community as an author and blogger, with my work featured on platforms like Amazon Kindle, Red Hat and DZone. I'm passionate about combining technical excellence with practical problem-solving to deliver impactful results.

Skills

Domains

Telecom • Energy/Utilities • Railways & Freight • Manufacturing • Financial Services

Architecture/Design

Enterprise Architecture • Technology/Solution Architecture • Distributed System Design • Domain Driven Design (DDD) • Event Driven Architecture (EDA) • Technology Strategy & Roadmap • Platform Engineering • Visio • UML • Platform, Database and Application Modernization & Cloud Migration

AI/GenAI

• Generative AI/GPT/LLMs, Agentic AI • Amazon Bedrock • Titan, Claude, LLaMa models • Chatbot/Conversational AI

Customer Engagement

Amazon Connect • Salesforce Service Cloud Voice • Live Chat • Avaya Contact Center Solutions • Genesys Cloud

Database

Data modelling • Database design & development • Database migration to Cloud • PostgreSQL • SQL Server • MySQL/MariaDB • Oracle • Redis • DynamoDB • MongoDB

Cloud

IaaS, PaaS, SaaS • Cloud Native & Serverless • Well Architected Framework • Amazon Web Services (AWS) - EC2, S3, Lex, Lambda, SES, SQS, SNS, DynamoDB, API Gateway, Route 53, PinPoint • RDS/Aurora, ElastiCache • Azure, Azure Database • FinOps/Cost Optimization • Data Center to Cloud Migration • Hybrid Cloud & Multi-Cloud Architecture

Development Methodologies & Frameworks/Languages

Desktop, Console, Windows Service & Web apps & services • .NET Framework/.NET Core • C#, VB, WinForms, WinUI • ASP.NET MVC • HTML5, JavaScript, Angular, React • NodeJS • WCF/WebAPI • REST/GraphQL • MicroServices, SOA • PowerShell • Python • GoF Design Patterns, Anti-Patterns • SOLID • GRASP • Automation & Tooling • Code Refactoring • Application Security • Object Oriented Programming (OOP) • Test Driven Development (TDD) • Agile • Waterfall model

DevSecOps

IaC, DevOps, CICD • CloudFormation • TerraForm • VSS/TFS, Git, Stash • Confluence, Jira, Jenkins Ansible, Artifactory • NUnit • Flyway • HP Fortify, HP WebInspect • BlackDuck, SonarQube

Experience

Senior Technology Architect

Infosys Limited (Since Dec 2018)

Senior Architect

Verizon India (Jun 2005 – Dec 2018)

Senior Developer

Accent InfoSoft Pvt Ltd (Aug 2003 – Jun 2005)

Senior Developer

Alpha Systems India Pvt Ltd (Dec 2002 – Aug 2003)

Software Engineer

Zydni Software Solutions (Jan 2001 – Nov 2002)

Education

Master of Computer Applications

University of Madras

Patents



US10051085B2 – System and method of data and command request processing

Granted in August 2018

Books & Blogs



Migrate your SQL Server Workloads to PostgreSQL (Second Edition)

This is a ready reference and a checklist for migrating your workloads from Microsoft SQL Server to PostgreSQL On-Prem and Cloud.

Red Hat Enable Architect Author

I have written a 5-Part article series on the subject of career progression from Developer to Architect.

Honors, Awards & Recognitions

Cloud Hackathon



Winner of Verizon Cloud Hackathon 2015. My Azure based solution to improve Agent Utilization in Contact Centers was selected as the winning solution among 65+ teams and 200+ participants across the globe.

Arctic Code Vault Contributor



Contributed code to the 2020 GitHub Arctic Code Vault Program

Open-Source & Side Projects

Re:Link

Re:Link is a Browser, except that it doesn't open any website; instead, it redirects the request to other installed browsers in the system based on predefined customizable rules. It works in Windows 10+ and Mac OS 10.x

MySQL2MongoDB

A Python script to automatically migrate MySQL table data to MongoDB collections.

DbStudio

A Database client tool for PostgreSQL and SQL Server, written completely in .NET.

Facade Database Pattern

A software pattern to restrict access to data in Relational Databases using a Facade Database.

Career Summary

Senior Technology Architect • Infosys Limited

As a Senior Technology Architect, I am involved in Technology and Solution Architecture of new and existing client systems and also building prototypes and proofs of concept for pre-sales opportunities. Here are a few important projects I have worked on:

Contact Center Migration and Modernization (July 2023 – Ongoing)

Designed and led the migration of customer voice support systems for a North American railway company from Genesys On-Prem to Salesforce Service Cloud Voice, integrated with Amazon Connect, improving system scalability and reducing downtime by 30%. Led the design of high-level architecture, call flow design, and E911 integration for Salesforce Service Cloud Voice, ensuring seamless AWS-Salesforce connectivity and compliance with safety standards. I also developed a Python framework for automating Amazon Connect Call flow deployments from Build to higher environments using a Zero-Touch approach.

I also played Enterprise Architect role in liaising with the client's Enterprise Architecture team in completing the Architecture Review Board requirements to certify the architecture of the system.

Outbound Campaign for a US Truck Company (Jan 2023 – June 2023)

Architected an AWS and Amazon Connect-based outbound campaign system to automate customer reminders for loan balances, achieving a 40% increase in customer response rate. My role includes building the high-level architecture, AWS integration and building custom components using Amazon Connect, AWS PinPoint, Lambda, DynamoDB and SNS.

Contact Center Modernization for a US Financial Services Company (Sep 2021 – Dec 2022)

This programme is a modernization effort for legacy Contact Center applications, services and databases. I have played a significant role in the architecture and development of the following projects:

LiveChat – Designed and implemented LiveChat feature leveraging Genesys Cloud and AWS, enabling seamless human-agent interaction through the web portal, reducing query resolution time by 25%. It uses Genesys Cloud as the backend and Genesys Embeddable framework as the front-end with AWS integration.

Chatbot Enhancement – Implement Transactional Chatbot, Improve Lex Intent recognition rate, Optimize Lambda structure, Unify Lambda configuration, CMS API Response Caching with ElastiCache/Redis.

Call Recording, Reporting & Analytics Platform (prototype) – Designed and built a portal to listen to customer calls without requiring Genesys licenses or credentials. Reporting & Analytics platform is based on Genesys Analytics as a Service (A3S), AWS S3, Lambda, DynamoDB and integration with customer's DataLake platform.

Latitude (Jan 2019 – Oct 2021)

Latitude is a debt recovery solution in the Accounts Receivables Management (ARM) vertical. It is one of the leading solutions for debt collection and recovery industry and used by over 120 Banks, Debt Collection Agencies in the US and other countries worldwide. As a Product Architect in the R&D team, I was responsible for the overall Product Architecture and Technology Roadmap for the product. Designed the high-level architecture, database schema and REST API contracts for nine new features of the product. Worked on CI/CD optimizations like incremental builds to improve release velocity.

Senior Architect • Verizon India

Verizon Communications Inc. is the largest Telecom Service Provider in the United States, and its Verizon Consumer Markets (VCM) Division has Call Centers spread across many States with thousands of agents handling over millions of customer calls every year. This platform provides the IT backbone and the applications and services that enable Call Centers to seamlessly handle calls with the highest level of operational excellence. As a Senior Architect in the VCM portfolio, I was involved in the Architecture, development and delivery of ACD Reporting and Data warehousing Platform, and successfully executed the Cloud migration of the platform from Tampa, Freehold and Fairland Data Centers to AWS Cloud between Dec 2017 and Apr 2019.

ACD Reporting Cloud Migration (Mar 2016 – Dec 2018)

ACD Reporting are a set of legacy Reporting Platforms based on ASP.NET, SQL Server and SSIS. The objective of this migration was to move the entire application stack from Legacy On-Prem infrastructure to AWS Cloud.

- Migrated on-premise Data Center Reporting application to AWS Cloud.

- Decommissioned old legacy on-premise infrastructure and saved \$1.8 million in software license upgrades and hardware retirement.
- Migrated the Web based User Interface to AWS Autoscaling Group and Application Load Balancer backed by EC2s. (Rehost)
- Migrated 11 SQL Server 2008 instances to a single AWS Aurora (PostgreSQL) database (Replatform)
- Migrated the ETL Platform from SSIS to Open-Source Talend ETL running on AWS EC2s (Replatform)
- Automated End-to-End deployment (CI/CD) of Web, ETL and Database platforms to AWS using Jenkins, Ansible and AWS CloudFormation.

Callback-As-A-Service (CaaS) (Oct 2014 – Feb 2016)

Designed and developed Callback solution that provides calling customers with an option to receive a callback instead of waiting in the queue. Callback Platform is based on Virtual Hold Technology platform with an elaborate integration framework with the Avaya Contact Center platform.

Architected the convergence of two different Callback platforms into a single Callback as a Service (CaaS) platform.

One-X Desktop Suite (Jan 2012 – Sep 2014)

Designed and developed a technically advanced solution to control and configure a Third-party Desktop Softphone using a Wrapper that configures the Softphone in Real-time using settings downloaded from a Remote Web service. This was designed to avoid manual configuration and deployment of the desktop Softphone to the 20,000+ stations.

Remote Request Response Framework (Patent Granted)

Architected and developed a patented technology to control and configure a software system using a remote method like email. The US patent [US10051085B2](#) was granted on 14th August 2018. This was used in the Common Logging Framework that was part of the Dispatch programme.

Infrastructure and Technology Upgrade/Migration

Managed all infrastructure related tasks like Server migrations and upgrade, setting up new environments for new projects, Database upgrade, Storage migration, etc.

DevOps / DevSecOps / Security

Led the DevOps initiative to achieve Continuous Delivery and Continuous Integration models of Software Development. Led the Application Security initiative to safeguard all internal and Internet-facing applications/services from external attacks and security vulnerabilities using tools like HP Fortify, Black Duck and SonarQube.

Senior Developer • Accent Infosoft India Pvt Ltd

At Accent Infosoft, I designed and developed an export and import product called IXPro, which dealt with the automation of all export and import activities and their corresponding documentation. It supported ahead-of-time and state-of-the-art features like runtime license check, multi-tenant support, automatic database version updates (similar to what Flyway does)

Senior Developer • Alpha Systems India Pvt Ltd

At Alpha Systems, I led the design and development of applications for the manufacturing industry. I wrote and implemented the AutoLoader algorithm for Total Production Control System (TPCS) which automatically generated the most optimized production schedule for a given set of machines, operators and open orders. In comparison to manual loading, it improved production throughput by more than 100%.

Software Engineer • Zydni Software Solutions

At Zydni, I designed and developed applications for multiple clients in the leather, manufacturing, accounting and inventory domains.

Personal Information

I was born and brought up in Chennai. I started writing code in GWBASIC while I was in my 10th grade, on an IBM PC XT computer with a 640KB RAM and a 20MB Hard Disk. My passion for programming was triggered by the consolation prize I won in 1998 in the NIIT Boot-It Contest that was telecast in Doordarshan. I live with my parents and I am married to a homemaker, and I have two kids, a daughter aged 12 and a son aged 7.

Activities/Hobbies

- Reading
- Blogging/Writing
- Numismatics
- Miniature Printing
- Astrophotography
- Speed-cubing