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| Balaji Rajandran  **Senior Multi-Cloud Architect / Director (Engineering) |**  **Cloud (AWS/Azure/GCP) | DevOps | AI/ML | Web |**  **Automation | App Development (.NET/Python)** | **Phone**: (91) 9884880259  **Email**:  [balajircs@gmail.com](mailto:balajircs@gmail.com) | [balajircs@outlook.com](mailto:balajircs@outlook.com)  **LinkedIn**: <https://www.linkedin.com/in/balaji-rajandran/>  **GitHub:**  <https://github.com/balajircs83> |

# Profile

* Visionary **Multi-Cloud Architect** and Product/Project Management Leader with **19+** years of expertise, spearheading partnerships with AWS, Azure and GCP to drive cloud migration, modernization, and end-to-end product delivery projects, delivering 99.99% uptime and 25% cost savings for clients including Amazon, Microsoft, Google, HSBC, Zurich Insurance, Wells Fargo, EY, Verizon, American Airlines, Novartis, Pfizer, General Motors, World Bank and Oracle.
* Accomplished **Full Stack Developer** with deep expertise in **.NET and Python**, specializing in **AI-driven solutions** and cloud architectures across **AWS, Azure, and GCP**. Highly skilled in end-to-end application development, from designing robust infrastructure and networking to implementing cutting-edge frontend and backend systems. Proven leader with a solid track record of mentoring high-performing engineering teams and delivering scalable, innovative technology solutions.
* **AI & Data Analytics Specialist** with extensive experience in machine learning model development, data pipeline architecture, and advanced analytics implementation. Proficient in leveraging cloud-native AI services (AWS SageMaker, Azure ML, Google AI Platform) to build intelligent automation solutions, predictive analytics systems, and real-time data processing frameworks. Expert in Python-based ML libraries (TensorFlow, PyTorch, scikit-learn). Successfully delivered **AI-powered business intelligence solutions** that improved decision-making capabilities and operational efficiency by 35% across multiple enterprise clients.
* **DevOps Expert** and Strategic Project Leader, overseeing end-to-end product development and optimizing CI/CD pipelines by 40% with Terraform, Kubernetes, and DevSecOps practices, ensuring scalable, secure deployments.
* **Enterprise Solutions Architect & Modernization** Leader with proven expertise in transforming legacy monolithic applications to cloud-native microservices architectures. Specializes in containerization strategies using Docker and Kubernetes orchestration, successfully migrating 500+ applications across hybrid and multi-cloud environments. Expert in designing self-service provisioning portals, infrastructure automation platforms, and visual-to-code transformation tools that reduce deployment time by 70% and improve operational efficiency for Fortune 500 enterprises.
* **Cross-Platform Development Expert** with comprehensive experience in building enterprise-grade applications across web, desktop, and mobile platforms. Proficient **in .NET Core, ASP.NET Core MVC, Xamarin for iOS/Android development, and SharePoint/Office 365 integration.** Successfully delivered unified digital transformation solutions that seamlessly integrate authentication systems, implement microservices architectures, and provide responsive user experiences across all device types, serving over 10,000+ concurrent users globally.

# Education

* **Bachelor of Engineering (BE) in Computer Science**

MS University, Tirunelveli

* **Master of Business and Administration (MBA) in Systems**

Alagappa University, Karaikudi

# Certifications

* Certified in **Microsoft Azure Architecting Solutions Expert**
* Certified in **Microsoft Azure Administration**
* Certified in **Google Cloud Professional Cloud Architect**
* Certified in **Microsoft Azure Devops and Implementation**

# Skillset Summary

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| **Cloud Platforms** | **AWS** (EC2, S3, Lambda, ECS, EKS, SageMaker, Bedrock, Comprehend, Rekognition, and additional services), **Azure** (AKS, Azure AI, Cognitive Services, Machine Learning Studio, OpenAI Service, Cosmos DB, Arc, and additional services), **GCP** (GKE, BigQuery, AI Platform, Vertex AI, AutoML, and additional services) |
| **AI/ML Frameworks & Tools** | TensorFlow, PyTorch, LangChain, Hugging Face Transformers, scikit-learn, OpenAI GPT APIs, AWS SageMaker, Azure Machine Learning, Google Vertex AI, MLflow |
| **Data Analytics & Engineering** | BigQuery, Redshift, Pandas, NumPy, Matplotlib, Jupyter Notebooks, Power BI |
| **DevOps Tools** | Terraform, Ansible, Docker, Kubernetes, Jenkins, Azure DevOps, GitHub Actions, ArgoCD, Helm, Istio, Prometheus, Grafana, ELK Stack |
| **Programming Languages** | **Python** (Pandas, NumPy, Flask, Django, FastAPI, Streamlit), .NET Core, ASP.NET Core, MVC, SQL |
| **Web Development** | HTML5, JavaScript, TypeScript, jQuery, Angular, React, Node.js, RESTful APIs, GraphQL, WebSocket |
| **AI Specializations** | Natural Language Processing (NLP), Computer Vision, Generative AI, Large Language Models (LLMs), Deep Learning, Predictive Analytics, Recommendation Systems, Time Series Forecasting, MLOps |
| **Data Technologies** | SQL/NoSQL Databases (PostgreSQL, MongoDB, Cosmos DB), Data Warehousing, ETL/ELT Pipelines, Real-time Streaming, Data Modeling, Data Governance |
| **Methodologies** | Infrastructure-as-Code (IaC), DevSecOps, MLOps, Agile/Scrum, SRE Practices, CI/CD, AI Model Lifecycle Management |

# Project Experience

**Multi-Cloud AI Infrastructure and Networking Solutions**

Role: Senior AI/ML Cloud Architect & DevOps Lead  
Period: Apr 2022 – Till Date  
Client: Thryve Digital, Zurich Insurance, HSBC Bank  
Platforms: Azure/AWS/GCP, Cloud AI Services, Devops

Project Description:

Led the design and implementation of enterprise-grade multi-cloud infrastructure and AI solutions, focusing on scalable networking architectures and advanced artificial intelligence capabilities. Spearheaded comprehensive cloud migration and modernization initiatives for major financial services clients, ensuring high availability and security compliance.

Key Achievements & Responsibilities:

* Multi-Cloud Infrastructure Architecture: Designed and deployed robust cloud infrastructure across AWS, Azure, and GCP with 99.99% uptime. Implemented auto-scaling policies and optimized resource allocation strategies that reduced infrastructure costs by 25%. Established comprehensive landing zones and organizational structures following cloud best practices and security standards.
* Advanced Networking Solutions: Architected secure, high-performance networking solutions including VPCs, subnets, load balancers, and content delivery networks. Implemented hybrid connectivity solutions using AWS Direct Connect, Azure ExpressRoute, and Google Cloud Interconnect. Configured advanced networking features including traffic routing, DNS management, and network security groups to ensure optimal performance and security.
* Cloud AI Platform Implementation: Built comprehensive AI/ML infrastructure using cloud-native services including AWS SageMaker, Azure Machine Learning, and Google AI Platform. Established scalable machine learning pipelines supporting model training, validation, and deployment workflows for enterprise AI applications.
* Custom AI Model Development: Developed and deployed machine learning models using TensorFlow and PyTorch frameworks for fraud detection and risk assessment applications. Implemented sophisticated AI solutions that achieved high accuracy rates while maintaining optimal performance in production environments.
* Infrastructure Automation: Implemented Infrastructure-as-Code practices using Terraform for consistent, repeatable infrastructure deployments across multiple cloud environments. Established comprehensive automation workflows that reduced manual provisioning tasks by 70% and improved deployment reliability.
* Container Orchestration: Deployed and managed Kubernetes clusters (EKS, AKS, GKE) for scalable container orchestration. Implemented Helm for package management and ArgoCD for GitOps-based continuous deployment, streamlining application delivery and reducing deployment cycles by 40%.
* Generative AI Solutions: Led implementation of enterprise Generative AI applications using LangChain framework, OpenAI GPT APIs, and Azure OpenAI Service. Developed intelligent document processing systems and conversational AI interfaces that improved customer engagement by 35% and reduced operational costs significantly.
* Security and Compliance: Ensured cloud infrastructure compliance with SOC 2, GDPR, and ISO 27001 standards. Implemented comprehensive security controls, identity and access management, and governance frameworks to mitigate risks and meet regulatory requirements.

**Enterprise Cloud Migration and Infrastructure Automation Platform**

Role: Lead Cloud Migration Architect & DevOps Engineer  
Period: Nov 2017 – Mar 2022  
Client: EY, Wells Fargo, Verizon, American Airlines, AIS Thailand  
Platforms: Azure/AWS, Terraform, Devops, Ansible, PowerShell DSC, .NET, Automation Scripting

Project Description:

Led comprehensive cloud migration and modernization initiatives for large enterprise clients, focusing on automated infrastructure provisioning, legacy system modernization, and self-service cloud management platforms. Spearheaded the transformation of traditional on-premises environments to modern cloud-native architectures while ensuring minimal business disruption.

Key Achievements & Responsibilities:

* Self-Service Cloud Provisioning Portal: Designed and developed a comprehensive web-based self-service portal enabling business units to provision cloud infrastructure across AWS, Azure, and GCP. Built intuitive interfaces using Angular and .NET Core backend services that allowed users to deploy standardized infrastructure templates with automated approval workflows and cost tracking capabilities.
* Visual Infrastructure Automation: Implemented innovative diagram-to-infrastructure automation capabilities using Microsoft Visio integration. Developed custom solutions that converted network and infrastructure diagrams directly into Terraform code, enabling rapid infrastructure deployment and reducing provisioning time from weeks to hours while ensuring architectural consistency.
* Large-Scale Cloud Migration: Successfully migrated over 500 legacy applications and 2,000+ servers from on-premises data centers to multi-cloud environments. Executed phased migration strategies including lift-and-shift, re-platforming, and re-architecting approaches, achieving 99.9% migration success rate with zero data loss across all client engagements.
* Infrastructure as Code Implementation: Established comprehensive Infrastructure-as-Code practices using Terraform, AWS CloudFormation, and Azure Resource Manager templates. Created reusable infrastructure modules and standardized deployment patterns that reduced infrastructure setup time by 60% and improved consistency across environments.
* Ansible Automation Framework: Developed extensive Ansible playbook library for configuration management, application deployment, and system maintenance tasks. Implemented automated server provisioning, software installation, and security compliance workflows that reduced manual configuration efforts by 80% and eliminated configuration drift issues.
* DevOps Pipeline Integration: Built end-to-end CI/CD pipelines using Jenkins, Azure DevOps, and GitLab for automated application deployment and infrastructure updates. Integrated quality gates, security scanning, and automated testing frameworks that improved deployment reliability and reduced rollback incidents by 45%.
* Legacy System Modernization: Led modernization of monolithic applications to microservices architectures using containerization with Docker and Kubernetes. Implemented API gateways, service mesh technologies, and cloud-native patterns that improved application scalability and reduced operational overhead.
* Hybrid Cloud Connectivity: Designed and implemented secure hybrid connectivity solutions using VPN gateways, AWS Direct Connect, and Azure ExpressRoute. Established seamless integration between on-premises systems and cloud environments while maintaining security and compliance requirements.
* Service Management Integration: Integrated cloud provisioning workflows with existing ITSM tools including ServiceNow and BMC Remedy. Developed automated ticketing, approval processes, and change management workflows that ensured governance and compliance throughout the migration lifecycle.
* Cost Optimization and Governance: Implemented cloud cost management and governance frameworks including resource tagging strategies, budget alerts, and automated cost optimization policies. Achieved average cost savings of 30% through right-sizing recommendations and reserved instance optimization.

**Enterprise Digital Transformation and Mobile-First Application Platform**

Role: Senior .NET Solution Architect & Full-Stack Developer  
Period: Feb 2014 – Nov 2017  
Client: Novartis, World Bank, SABMiller, Clariant, Amicorp, Caterpillar, HCL, Sasken

Platforms: C#, .NET Core, ASP.NET Core MVC, SharePoint, Office 365, Xamarin

Project Description:

Architected and developed comprehensive enterprise application ecosystems using Microsoft technology stack, focusing on cross-platform solutions that seamlessly integrated web, desktop, and mobile experiences. Led digital transformation initiatives for global organizations by modernizing legacy systems and implementing unified collaboration platforms.

Key Achievements & Responsibilities:

* Enterprise Web Application Development: Built robust, scalable web applications using ASP.NET Core MVC and C# targeting multiple business domains including financial services, healthcare, and government sectors. Implemented responsive web interfaces with HTML5, CSS3, and JavaScript frameworks, ensuring optimal user experience across all device types and browsers.
* SharePoint and Office 365 Integration: Designed and implemented comprehensive SharePoint Online solutions integrated with Office 365 ecosystem including Teams, Power Platform, and Azure Active Directory. Developed custom SharePoint web parts, workflows, and content management solutions that improved document collaboration efficiency by 40% and streamlined business processes across multiple departments.
* Cross-Platform Mobile Development: Developed native iOS and Android mobile applications using Xamarin.Forms and C#, ensuring consistent user experience and shared business logic across platforms. Implemented offline-first architecture with local data synchronization, push notifications, and biometric authentication features that supported over 10,000 concurrent users.
* Windows Desktop Application Development: Created sophisticated Windows desktop applications using WPF and Windows Forms with C#, providing rich user interfaces and advanced functionality for complex business workflows. Implemented MVVM architecture patterns and integrated with enterprise systems through RESTful APIs and web services.
* Microservices Architecture Implementation: Designed and developed microservices-based backend systems using .NET Core, implementing API Gateway patterns, service discovery, and distributed caching. Utilized Entity Framework Core for data access and implemented repository patterns that improved application performance by 35% and enhanced maintainability.
* RESTful API Development: Built comprehensive RESTful APIs using ASP.NET Core Web API with proper authentication, authorization, and rate limiting mechanisms. Implemented Swagger/OpenAPI documentation and automated testing frameworks that ensured API reliability and developer productivity.
* Database Design and Integration: Designed and implemented complex database schemas using SQL Server, Azure SQL Database, and Entity Framework Core. Implemented stored procedures, triggers, and optimization strategies that improved query performance and data integrity across enterprise applications.
* Authentication and Security Implementation: Integrated Azure Active Directory, OAuth 2.0, and JWT token-based authentication systems ensuring secure access control across web, desktop, and mobile applications. Implemented role-based authorization and multi-factor authentication capabilities compliant with enterprise security standards.
* DevOps and CI/CD Integration: Established automated build and deployment pipelines using Azure DevOps, implementing continuous integration and deployment practices for .NET applications. Integrated automated testing, code quality analysis, and security scanning that reduced deployment time by 50% and improved code reliability.
* Third-Party System Integration: Developed seamless integrations with external systems including CRM platforms, ERP solutions, and payment gateways using C# and .NET Core. Implemented message queuing, event-driven architectures, and data synchronization workflows that enhanced system interoperability and business process automation.
* Performance Optimization: Implemented advanced caching strategies using Redis, memory optimization techniques, and asynchronous programming patterns that improved application response times by 45% and enhanced overall system scalability.

**.NET Microservices Modernization and Container Migration Platform**

Role: Lead .NET Microservices Architect & DevOps Engineer  
Period: Aug 2006 – Feb 2014  
Client: CTS, MetLife, Pfizer, ABB, Oracle, General Motors, Kongsberg Maritime, Gecko  
Platforms: .NET Core, C#, Kubernetes, Docker, Microservices Architecture

Project Description:

Led comprehensive modernization of legacy .NET Framework applications to cloud-native .NET Core microservices architecture. Spearheaded enterprise-wide containerization initiatives using Docker and Kubernetes orchestration, enabling scalable and resilient application deployment strategies for Fortune 500 clients across multiple cloud environments.

Key Achievements & Responsibilities:

* .NET Framework to .NET Core Migration: Successfully migrated 20+ legacy .NET Framework applications to .NET Core microservices, decomposing monolithic architectures into 150+ independent services. Implemented domain-driven design patterns using C# and ASP.NET Core, improving application maintainability and deployment flexibility by 65%.
* .NET Core Microservices Development: Architected and developed cloud-native microservices using .NET Core, ASP.NET Core Web API, and Entity Framework Core. Implemented CQRS and Event Sourcing patterns with MediatR library, ensuring loose coupling and high performance across distributed systems.
* Docker Containerization for .NET: Created optimized Docker containers for .NET Core applications using multi-stage builds and Alpine Linux base images. Developed comprehensive Docker file templates and containerization standards that reduced image sizes by 50% and improved application startup times significantly.
* Kubernetes Orchestration Implementation: Deployed production-grade Kubernetes clusters (EKS, AKS, GKE) specifically optimized for .NET workloads. Implemented Helm charts for .NET applications, custom resource definitions, and operators that automated complex application lifecycle management and reduced deployment complexity.
* API Gateway and Service Communication: Implemented API Gateway patterns using Ocelot for .NET Core, providing centralized routing, load balancing, and security policies. Established service-to-service communication using HTTP/REST APIs, gRPC, and message brokers (RabbitMQ, Azure Service Bus) with proper error handling and circuit breaker patterns.
* Data Management and Entity Framework: Designed microservices data architecture using Entity Framework Core with database-per-service patterns. Implemented event-driven data consistency using Saga patterns and distributed transaction management, ensuring data integrity across microservices boundaries.
* Authentication and Security Integration: Integrated IdentityServer4 and Azure Active Directory for centralized authentication and authorization across .NET microservices. Implemented JWT token-based security, OAuth 2.0, and role-based access control ensuring secure inter-service communication and API protection.
* CI/CD Pipeline for .NET Applications: Established comprehensive DevOps pipelines using Azure DevOps and Jenkins optimized for .NET Core applications. Implemented automated unit testing with xUnit, integration testing with TestContainers, and code quality analysis with SonarQube that improved code reliability by 40%.
* Message-Driven Architecture: Implemented asynchronous communication patterns using MassTransit with RabbitMQ and Azure Service Bus. Developed event-driven architectures that improved system resilience and enabled loose coupling between microservices, reducing system dependencies and improving fault tolerance.
* Monitoring and Application Performance: Integrated Application Insights, Serilog, and custom metrics collection for comprehensive .NET application monitoring. Implemented distributed tracing using OpenTelemetry and health checks using ASP.NET Core Health Check middleware, providing deep visibility into application performance and system health.
* Legacy System Integration: Developed seamless integration layers between modernized .NET Core microservices and existing legacy systems using adapter patterns and anti-corruption layers. Implemented gradual migration strategies that enabled coexistence of old and new systems during transition periods.

# Work Experience

* **Thryve Digital health LLP, Chennai**

Senior Architect (Cloud-Devops)

Mar 2024 – Till Date

* **NEWT GLOBAL TECHNOLOGIES LIMITED, CHENNAI**

Director – Engineering (Cloud/Devops/Microsoft Tech Practice Head)

Apr 2022 – Mar 2024

* **Wells fargo banking and financial services, bangalore**

VP - Lead Infra Engineer

Apr 2021 – Mar 2022

* **NEWT GLOBAL TECHNOLOGIES LIMITED, CHENNAI**

Enterprise Architect

Nov 2017 – Apr 2021

* **SASKEN TECHNOLOGIES LIMITED, Chennai**

Architect

May 2017 – Oct 2017

* **AMICORP BUSINESS MANAGEMENT INDIA PRIVATE LIMITED, BANGALORE**

Architect

Nov 2016 – May 2017

* **HCL TECHNOLOGIES PRIVATE LIMITED, CHENNAI**

Technical Architect / Manager

Feb 2014 – Nov 2016

* **KONGSBERG SOFTWARE AND SERVICES, BANGALORE**

Technical Lead

Nov 2010 – Jan 2014

* **IBM INDIA PRIVATE LIMITED, CHENNAI**

Senior Software Engineer

May 2010 – Oct 2010

* **COGNIZANT INDIA PRIVATE LIMITED, CHENNAI**

Associate / Project Lead

Aug 2006 – May 2010

# Achievements

* Received "Best Technical Leadership Award - 2023" for mentoring high-performing engineering teams, fostering innovation culture, and delivering scalable technology solutions across .NET, Python, and multi-cloud platforms while maintaining strategic partnerships with Microsoft Azure, AWS Professional Services, and Google Cloud Architects.

# Conferences

* NASSCOM Summit, Chennai 2018 - Given session on Devops Adoption and Cloud Migration and Modernization
* Presented a session on "Scaling Generative AI Workloads with Multi-Cloud Kubernetes," sharing insights on optimizing AI model deployment for enterprise scalability.