

**Resume of Ramanujam T.S**

Principal Architect

Consulting & Advisory Services

**PERSONAL INFORMATION**

|  |  |
| --- | --- |
| **Name** | Ramanujam T. S |
| **Contact number** | 91-9840746644 |
| **Email** | [aintvoguish@gmail.com](mailto:aintvoguish@gmail.com) |
| **Current Role** | Principal Architect |

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**SUMMARY**

* Advisory Principal Architect for largest retailer – Macys account and built unified order Platform.
* 17+ Years of IT Industry experience with Specialization in Digital Transformation, Information Management Consulting, Enterprise Application Integration, Service-Oriented architecture, Cloud application Development.
* Worked at onsite for 3 years in one of largest bank in USA, 2 Years in Canada in one of Top5 Banks & 1 Year in United Kingdom for largest old Retailer.
* Expertise in latest Technology trends such as Micro services, Safe-Agile, Cloud Application (AWS, Azure, and Hybrid), Dev Ops, Data Engineering, and ML & AI Solutions.
* Portfolio Architect for leading largest UK retailer on Clothing &Home, International division of Enterprise Architecture Team
* Consulting Proficiency in Cloud advisory (roadmap on adoption) Program, Data Driven Digital Transformation Framework, Enterprise Capabilities Map, Safe Agile Value chain.
* Possess deep understanding and knowledge of Integration, Application Modernization, Portfolio assessment, Value chain adoption, Microservices framework, and Full Stack Engineering

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**EDUCATION**

* **Bachelor of Computer Science**, University of Madras, 2004

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**TRAINING & CERTIFICATIONS**

* Sun Certified Java Developer, Web developer, Webservices
* IBM MDM
* SAFE – Agile Certified
* TOGAF – Architecture Forum
* Design Thinking – Interaction Design Foundation
* IBM – Cloud Computing Foundation (Bluemix)
* AWS - Cloud Advisory, CAF, Well Architected – Boot Camp
* QWIKLABS – Cloud Solution Architecture Pathway.
* Microservices Boot Camp - Richardson
* Full Stack Engineering – Plural Sight

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**ARCHITECTURE COMPETENCY**

**Core Competencies**

* Solution Architecture Expertise: TOGAF certified, experienced in full solution lifecycle from feasibility assessment to implementation.
* Technical Leadership: Lead and mentor cross-functional technical teams, ensuring successful project delivery.
* Domain Knowledge: Deep understanding of [Your Domain Expertise] business processes, enabling tailored solutions.
* Emerging Technologies: Stay ahead of the curve, evaluating and integrating innovative solutions for competitive advantage.
* Stakeholder Management: Effectively communicate with both technical and non-technical stakeholders at all levels.
* Vendor/Partner Management: Collaborate with external parties to optimize technology utilization and availability.
* Agile/DevOps Advocate: Experienced in Agile methodologies and DevOps practices, ensuring flexibility and efficiency.

**Key Responsibilities*:***

* Worked with product owners, subject matter experts, and product managers to design fit-for-purpose solutions.
* Worked with clients to understand the business case for adopting cloud native approach to developing and delivering software.
* Developed client’s enterprise technology, API strategy and cloud deployment models.
* Facilitated removal of client technical barriers and manage architectural runway to ensure engagement success.
* Ensured technical collaboration between pods teams.
* Provide guidance on continuous integration and test-driven development practices.
* Presented capabilities and custom demos of offerings and solutions to clients.
* Developed thought leadership content, use cases and business cases.
* Delivered road map consisting of technology competency areas – Cloud Native, Microservices and APIs, Reactive Systems, Observability and SRE, Analytics & Streaming Pipelines, Devops – CI/CD

**Capabilities / Skills / Knowledge areas:  ​​​​​​​**

* Excellent communication and presentation skills, both verbal and written, in English.
* Codes software components using JavaScript, Java, Spring Framework, relational databases and message queues.
* Creates and maintains CI builds using Jenkins, Concourse or similar tools.
* Experience in designing and deploying cloud-native enterprise applications in public or private cloud platforms (e.g., AWS, Azure, GCP, OpenShift / K8s + Containerization).
* Experience with Serverless, Reginal Deployment, Self-Healing, Compute, Auto scaling, Storage, Gateway, API Management, Networking and Security Constructs
* Deep understanding of microservices architecture concepts and how to implement them.
* Strong understanding of required patterns (microservices design: bounded context, event driven and operational isolation; 12 factor apps and principles; API design, management, and implementation).
* Demonstrated knowledge of network and security architectures.
* Proven knowledge of resilient design patterns (redundancy, autoscaling, health checks, failover strategies, avoidance of cascading failures, operational isolation, etc)
* Data, data modelling and database management- Knowledge of various database technologies and use-cases (e.g., Relational, NoSQL, Graph, Caching Options, etc.)
* Understanding of Enterprise Architecture Governance and regulatory concerns
* In-depth understanding of Domain Driven Design.
* Has led complex programs and agile development teams.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**ACHIEVEMENTS**

|  |
| --- |
| **Details** |
| Awarded Best Integration architect for New Product rollout – Easy online payroll |
| Won a Hackathon conducted by largest retailer in UK – Virtual reality business case Proof of concept |
| Won a Hackathon for largest retailer -US for Implementation Machine learning solution – Basket Analysis  (Aprior Algorithm) |
| Presented a Paper on ‘Service-Oriented Architecture and Business Integration’  and won 2nd prize for the same in Technology Day |
| Event Organizer of year for conducting employee engagement Program for 6000 associates on latest trends & technology– Tech Fest. |
| Great Deal winner Award for winning RFP worth 2mn $ |
| Awarded best Architecture proposal solution in TACTICS – Architecture Conference |
| Best Demo Stall award during yearly BFS Technology Townhall – RoboAdvisor for Investments |
| Applied Patent in largest services company for IPR “Approach to design an efficient Online payment processing system using Half Sync /Half async Pattern” |
| Awarded for Best question in Tata Dialogue Forum and met IHCL CEO for lunch and shared the thought process from industry point of view. Special invitee to meet Group Chairman |

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**SKILLS SUMMARY­**

|  |  |  |  |
| --- | --- | --- | --- |
| **Languages/Frameworks/Libraries, Databases, Dev tools, Business Domain Knowledge, Management Skills** | **Exp Level (1-5)**  **1 = New,**  **5 = Expert** | **Year Exp** | **Last used (Year)** |
| Java | 4 | 16 | Current |
| J2EE | 4 | 15 | 2021 |
| Spring Boot | 4 | 10 | Current |
| Microservices | 4 | 10 | Current |
| IBM Master Data Management | 3 | 5 | 2020 |
| REST Services | 4 | 15 | current |
| API Documentation (Swagger, OPENAPI) | 3 | 5 | 2020 |
| API – Management (Lifecycle) | 3 | 5 | 2020 |
| API – Security (Oauth2, Okta, Architecture) | 3 | 5 | 2021 |
| Webservices – WSDL/SOAP, registry | 3 | 5 | 2015 |
| Full Stack – Angular | 3 | 5 | Current |
| Full Stack – React | 3 | 3 | 2021 |
| Cloud Advisory | 4 | 5 | Current |
| Enterprise Application Integration | 4 | 8 | 2021 |
| Cloud Architecture (Compute, Storage, Data) | 4 | 5 | Current |
| Software -AG / WebMethods | 3 | 7 | 2019 |
| Spring Ecosystem (Security, JPA, REST, etc) | 3 | 10 | Current |
| Docker & Kubernetes | 3 | 5 | Current |
| CI /CD - Devops | 3 | 5 | Current |
| IFW / IFX - Framework | 2 | 3 | 2018 |
| Cloud Application Development | 3 | 5 | Current |
| Azure /AWS – Well Architected Framework | 3 | 5 | Current |
| Application Modernization | 4 | 8 | Current |
| Scripting (Unix Bash, Shell, Ansible) | 3 | 3 | 2020 |
| Solution Design & Architecture | 4 | 12 | Current |
| Banking, Retail | 3 | 15 | Current |
| Leadership, Learning, Initiative, Problem Solving, Teamwork, Innovation | 4 | 16 | Current |

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**PROFESSIONAL EXPERIENCE**

*(Highlighted few projects below for brevity– Additionally supported multiple projects as dual responsibility)*

**Largest retailer USA – Unified Order Platform**

**Principal Architect**

November 2022 – December 2023

Role: Principal Architect largest Modernization Program.

Technologies: GCP, Spring Boot, Microservices, Kubernetes, Java, Data Engineering, Migration

Summary: Build a unified order platform consist of 40+ microservices in GCP platform with containerized deployment.

GCP Components: Spanner, Pub / Sub, Firestore, Cloud Functions, Monitoring, Java Client library

Architecture: Event Driven Architecture, REST, Cloud Well Architected Principles, Resiliency, Performance, Thread Executors, Active Monitoring,

1. Architecture Meetings: Regular meetings with Macys architects and Google SME played a pivotal role in shaping the architecture and vision of the project. The constructive discussions and collective decision-making greatly contributed to its success.
2. Performance and Order Management Platform: The efficient functioning of our performance and order management platform ensured smooth operations and customer satisfaction. Attention to detail and continuous improvement efforts were commendable.
3. Handling Peak Traffic: We tackled high traffic periods with resilience, optimizing the system to handle a surge of users and maintaining optimal performance throughout.
4. Java Performance: Proficiency in Java programming played a significant role in enhancing the overall performance and stability of the project. The code optimization techniques employed were impressive.

Successfully implemented thread pool capacity configuration for async threads, HPA scaling based on unacknowledged messages, and handling shutdown events with utmost precision. Efforts in ensuring PUB/SUB throughput monitoring, rate limiting, POD resilience measures, K8 Node Capacity planning, PUB/SUB ordering of messages, and fine-tuning HTTP connection settings.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**ANZ – Integration**

**Solution / Cloud Architect**

June 2022– Oct 2022

Technologies Used: GCP, Nginx, Apigee, Integration, Rules

Worked on Migration of Apigee to Nginx.

Provided road map and consultation for migrating intergeneration functionality to Nginx.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**PayPal – Merchants Digital Replatform**

**Solution / Cloud Architect**

April 2020 – June 2022

Technologies Used: GCP, Spring Boot, Microservices, Apache Spark, Java, Data Engineering, Migration

Working on Unified onboarding/reporting program for Merchant division of recently acquired PayPal products (Braintree, Hyperwallet, Venmo). Define solution blueprint for Data migration strategy on GCP Cloud and enable unified reporting using Apache spark/Scala ecosystem. Define Architecture Principles, process and methodologies, implementation strategy for report generation using microservices nomenclature and standards.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**M&S Transformation: Capability & Strategy**

**Portfolio Architect – Clothing & Home**

January 2018 – March 2020

Technologies Used: Microsoft Azure, Spring boot, Archimate, C4-Model, Java, CI/CD - Kubernetes

Conceptualized & implemented reference architecture for application modernization using framework &

system pattern. Architecture blueprint comprising Domain Driven Design centric, microservices, API,

12 Factor APP, reusable templates, frameworks. Design and implement scalable, clustering enabled

distributed cache layer using Apache-Ignite

Liaison between business & Technology to adopt new initiatives, address paint points, assist in process improvement initiatives.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**BMO-Wealth Management - Smart Folio**

**Solution Architect**

April 2015 – December 2017

Technologies Used: Spring MVC, Spring boot, Java, CI/CD – Kubernetes, IBM WebSphere, REST Services

Architected the RoboAdvisor-self servicing platform for wealth management line of business comprising of

functionalities such as onboarding, credit risk, Digital Signature leveraging bank's system of record

by adopting technical framework SPA, Microservices & Agile Methodologies

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**BMO-MFA Web /HUB-Credentials**

**API Architect**

October 2013 – March 2015

Technologies Used: Java, J2EE, Spring-Struts, Webseal, App Scan, Policy Server, ISAM

Develop Integration Solution architecture blueprint for Investor line with Centralized Identity Access

Management Components like FIM IAM, ISAM, Webseal, Policy Server. Implement API for Wealth

management authentication & authorization business function.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**BMO - Customer 360**

**MDM Advisory Consultant**

June 2012 – September 2013

Technologies Used: Visio, PowerPoint, MS Office, IBM Master Data Management, IBM PIM

Develop MDM Implementation roadmap including channel cut-over strategy, Layout sequencing

and milestone. Provide traceability matrix for business attribute to services, user interface and batch

process. Recommended HUB/MDMSOA Service model & strategic solution for BMO One-ID approach

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**BOA-Ecommerce Borneo Platform**

**Senior Designer**

August 2009 – May 2012

Technologies Used: Struts, Spring MVC, Hibernate, Maven, IBM WAS, Mysql, CAST

Design and implement Online banking applications from legacy platform to Borneo framework.

Business -Authentication system, Account Overview details, Payment, Transfer, Help & Support etc.

Rearchitect /Replatform the web application aligned to customer activity view leveraging IFW Standards.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**BOA-Customer System Architecture**

**Onsite Lead / Senior Developer**

November 2007 – July 2009

Technologies Used: IBM MDM, IBM PIM, Java, J2EE, IBM WAS, Postman, Shell Scripts, DS, QS

Design and implement 360-degree view of customer to support single view for customer applications.

Provided JEE Solution leveraging IBM MDM product to enable single reference or customer system of

records. Develop extensible framework for merger and acquisitions

Deep understanding Data management solution aligned to industry standards consists of Data quality process such as Address & Name Standardization, Duplicate Suspect processing, & other data transformation / quality enhancements.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**BOA-Object Orchestration Services**

**API Developer**

April 2006 – October 2007

Technologies Used: Contivo, WTX, IBM XI50 , Webmethods, IS, Java, WSDL, SOAP, IBM MQ, Postman

Provide Comprehensive integration solution adopting 3T Framework namely – Transact, Transform, Transport. Implement transformation rules and XSLT development using Contivo & WTX.

Design & Implement IBM Data Power XI50 for large scale API Management solution. Develop business transformation rules using XSLT and enforce security standards for appropriate access.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**BOA - Enterprise Application Integration**

**Developer**

February 2005 – March 2006

Technologies Used: Software AG Webmethods, IS, Trading Networks, Modeler, Java, XML, WSDL, SOAP

Develop components for Bank integration system leveraging Web Methods components to

orchestrates and integrates disparate customer system data and helps to synchronize data across

the enterprise. Develop API to support integration across bank for different business functionality

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**Initial Learning Program**

**Trainee**

December 2004 – January 2005

Technologies Used: Software Engineering, Data Structure

Imparted industry aligned training program both on technology and behavioural competency. Learnt Corporate culture and best practises to solve problem by software engineering principles. Understand the importance of Data Structure and its practical implementation using lab exercises.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**Appendix A:**

**Summary of AWS Microservices Project Implementation Experience - A Game-Changing Approach**

The synopsis of architecture experience and my recommendation for AWS implementation as cloud solution architect.

In today's technology-driven world, AWS (Amazon Web Services) has established itself as a leading cloud computing platform, offering a wide range of services to enhance digital innovation. One of the key aspects of AWS is its ability to support the implementation of microservices architectures, revolutionizing the way applications are developed and deployed.

I have outlined steps involved in successfully implementing microservices using AWS, the design considerations, and the architectural practices to follow for one of the largest retailer on US East region.

**Step 1: Understanding Microservices and Cloud Principles**

To embark on an AWS microservices implementation journey, it is essential to have a solid understanding of microservices architecture and the underlying cloud principles. Microservices involve breaking down applications into smaller, manageable components, allowing for independent development and deployment. AWS offers a plethora of cloud services that align perfectly with microservices, enabling seamless scalability, fault tolerance, and cost optimization.

**Step 2: Well-Architected Framework**

This framework provides best practices and guidance on designing and operating highly effective architectures that leverage the power of AWS services. By following this framework, we demonstrate our ability to design applications that are secure, performant, resilient, and efficient.

**Step 3: Design Considerations for Microservices Architecture**

* Service boundaries: Clearly define the boundaries and responsibilities of each microservice to achieve loose coupling.
* Service communication: Determine the communication patterns between microservices, such as synchronous or asynchronous, to ensure efficient data flow.
* Data management: Plan how data will be managed across microservices, taking into account replication, consistency, and data access patterns.
* Fault tolerance: Design your microservices to be resilient to failures, leveraging AWS services like Elastic Load Balancing and Amazon RDS for fault tolerance and automatic scaling.
* Security: Incorporate security measures at every level, from network configurations to authentication and authorization mechanisms.

**Step 4: Implementation: Putting Your Design into Action**

1. Infrastructure Provisioning: Utilize AWS CloudFormation or Terraform to provision the required infrastructure resources, such as virtual private clouds (VPCs), subnets, and security groups.
2. Containerization for Microservices: Leverage Amazon Elastic Container Service (ECS) or Amazon Elastic Kubernetes Service (EKS) to containerize your microservices for efficient deployment and management.
3. Service Orchestration: Use AWS Step Functions or AWS Simple Workflow Service (SWF) to manage the workflow and coordination between microservices.
4. Event Streaming: Employ AWS services like Amazon Kinesis or Amazon Event Bridge for real-time event streaming and processing across your microservices.
5. Monitoring and Logging: Implement robust monitoring and logging solutions using AWS CloudWatch, AWS X-Ray, or third-party tools to gain insights into the performance, health, and availability of your microservices.
6. Continuous Integration and Deployment: Embrace AWS Code Pipeline, AWS CodeCommit, and other DevOps tooling to automate your build, test, and deployment processes, fostering a culture of continuous integration and delivery.

**Step 5: Architectural Practices for Success**

* Use of serverless computing with AWS Lambda to optimize resource utilization and eliminate the need for server provisioning.
* Leverage AWS API Gateway to provide a unified entry point for your microservices, enabling easy scaling, caching, and authentication.
* Implement distributed tracing with AWS X-Ray to gain visibility into the end-to-end execution of requests across your microservices.
* Embrace a microservices-specific monitoring strategy through custom dashboards and alarms to proactively identify and mitigate issues.
* Incorporate automated testing, including unit, integration, and end-to-end testing, to ensure the reliability and correctness of your microservices.

Hands-on experience in AWS microservices implementation with mastering the design considerations, architecture practices, and implementation steps outlined above, helped clients in developing scalable, resilient, and cloud-native applications. With AWS **competency and know-how imlenentations steps have tackled complex projects and brought innovation to the table.**

**Appendix B:**

**Project: Ecommerce/Online banking Migration to AWS**

**Client: Largest Financial Services provider – US WEST.**

**Microservices implementation:**

* **Key Components and approach:**
  + Continuous integration and continuous deployment (CI/CD)
  + Private networking
  + Data store
  + Simplifying operations
    - Deploying Lambda-based applications
    - Abstracting multi-tenancy complexities
    - API management
  + Microservices on serverless technologies
  + Resilient, efficient, and cost-optimized systems
    - Disaster recovery (DR)
    - High availability (HA)
  + Distributed systems components
  + Distributed data management
  + Configuration management
    - Secrets management
  + Cost optimization and sustainability
  + Communication mechanisms
    - REST-based communication
    - GraphQL-based communication
    - gRPC-based communication
    - Asynchronous messaging and event passing
    - Orchestration and state management
  + Observability
    - Monitoring
    - Centralizing logs
    - Distributed tracing
    - Log analysis on AWS
  + Managing chattiness in microservices communication
    - Using protocols and caching
  + Auditing
    - Resource inventory and change management.
    - KeyResponsibilities:

Lead the architectural design for transitioning from a monolithic to a microservices architecture.  
 Develop a comprehensive roadmap outlining the migration process, including timelines, milestones, and key deliverables.  
Collaborate with cross-functional teams to analyze current systems, identify dependencies, and propose solutions for decoupling.  
Define architectural principles, patterns, and standards to guide the microservices implementation.  
- Conduct risk assessments and ensure compliance with security and performance requirements.  
- Provide technical guidance and support to the development team throughout the migration project.  
- Continuously monitor and evaluate the architecture to optimize performance and agility.