**Sundar R**

FSE / Architect

## PERSONAL INFORMATION

**Name** Sundar R

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**Current Role** Cloud/ Full Stack / Architect

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## SUMMARY

* Architect for largest retailer –Retail account and built unified order Platform.
* 10+ 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

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## EDUCATION

* **Bachelor of Computer Science**

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## 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

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## COMPETENCY

#### 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.
* Mentored and develop local developers.
* Developed thought leadership content, use cases and business cases.
* Delivered product 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.
* Develops approaches to testing and writes unit tests using Junit or other test frameworks.
* 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
* Deep understanding of software programming fundamental concepts.
* In-depth understanding of Domain Driven Design.
* Experience with continuous integration/deployment tools and best practices in DevOps.
* Has led complex programs and agile development teams.
* Demonstrated project management leadership.

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## SKILLS SUMMARY

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| **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 | 10 | Current |
| J2EE | 4 | 9 | 2021 |
| Spring Boot | 4 | 10 | Current |
| Microservices | 4 | 10 | Current |
| IBM Master Data Management | 3 | 5 | 2020 |
| REST Services | 4 | 8 | current |
| API Documentation (Swagger, OPENAPI) | 3 | 5 | 2020 |
| API – Management (Apigee) | 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 | 7 | 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 | 7 | Current |
| Banking, Retail | 3 | 8 | Current |
| Leadership, Learning, Initiative, Problem Solving, Teamwork, Innovation | 4 | 8 | Current |

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## PROFESSIONAL EXPERIENCE

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

#### Largest retailer USA – Unified Order Platform

##### Microservices Full Stack Architect

July 2022 – December 2024

Role: Full Stack - 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 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.

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#### 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.

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#### UK Retailer Transformation: Mainframe Modernization

##### Portfolio Architect – Clothing & Home

January 2018 – March 2020

Technologies Used: Microsoft Azure, Spring boot, 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.

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#### BMO-Wealth Management - Smart Folio

##### Solution Architect

April 2017 – December 2018

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

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#### BOA-Ecommerce Borneo Platform

##### Senior Designer

August 2015 – May 2017

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.

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**Appendix A:**

### GCP Microservices Project Implementation Experience :

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

In today's technology-driven world, GCP has established itself as a leading cloud computing platform, querying a wide range of services to enhance digital innovation. One of the key aspects of GCP 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 GCP, 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 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. GCP oUers 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 GCP 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

1. Service boundaries: Clearly deﬁne the boundaries and responsibilities of each microservice to achieve loose coupling.
2. Service communication: Determine the communication patterns between microservices, such as synchronous or asynchronous, to ensure efficient data ﬂow.
3. Data management: Plan how data will be managed across microservices, taking into account replication, consistency, and data access patterns.
4. 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.
5. 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 Google Cloud Deployment Manager or Terraform to provision the required infrastructure resources, such as virtual private clouds (VPCs), subnets, and ﬁrewall rules.
2. Containerization for Microservices: Use Google Kubernetes Engine (GKE) to containerize your microservices for eUicient deployment and management.
3. Service Orchestration: Use Google Cloud Workﬂows to manage the workﬂow and coordination between microservices.
4. Event Streaming: Employ Google Cloud Pub/Sub for real-time event streaming and processing across your microservices.
5. Monitoring and Logging: Implement robust monitoring and logging solutions using Google Cloud Monitoring and Google Cloud Logging, or third-party tools to gain insights into the performance, health, and availability of your microservices.
6. Continuous Integration and Deployment: Embrace Google Cloud Build, Google Cloud Source Repositories, 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 Google Cloud Functions to optimize resource utilization and eliminate the need for server provisioning.
* Leverage Google Cloud Endpoints to provide a uniﬁed entry point for your microservices, enabling easy scaling, caching, and authentication.
* Implement distributed tracing with Google Cloud Trace to gain visibility into the end-to-end execution of requests across your microservices.
* Embrace a microservices-speciﬁc monitoring strategy through custom dashboards and alerts with Google Cloud Monitoring 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 Google Cloud microservices implementation with mastering the design considerations, architecture practices, and implementation steps outlined above, helped clients in developing scalable, resilient, and cloud-native application