

**Sumit Dahiya**  
**Solution Architect at Barclays Americas**

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  - **Location:** Edison, New Jersey, USA
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## 1. Summary of Qualifications

Accomplished Solution Architect and Delivery Lead with over 18 years of experience in technology and security, specializing in digital transformation and Identity and Access Management (IAM). Renowned for pioneering innovative solutions, driving major transformations, and leading global teams to achieve industry-leading standards. Recognized by notable institutions for designing unique, industry-leading frameworks at Barclays. Adept at leveraging open-source technologies to build and operate large-scale business solutions across multiple industries.

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## 2. Professional Experience

**Barclays, New Jersey, NJ, USA**

**Project Lead: Digital Colleague Workspace (One Framework)**

**February 2023 – Present**

- Spearheaded the design and implementation of the One Framework, a groundbreaking platform that significantly enhanced compliance, Identity and Access Management (IAM), and core functions across Barclays.
- Directed and reviewed work from colleagues, ensuring the highest standards and strict adherence to project goals and timelines.
- Implemented state-of-the-art technologies to elevate compliance and IAM functionalities, significantly driving efficiency and security.
- Innovated and developed shared services to be utilized across various departments of the bank, promoting uniformity and resource optimization.
- Developed and integrated a common Entitlement System and User Management processes with Workday, streamlining user access and identity management across the organization.
- Enhanced task and notification systems, establishing a unified platform for colleague interaction and vastly improving user experience.
- Led globally distributed teams across regions including APAC and the USA, fostering collaboration and ensuring consistent project execution.

- Played a key role in interviewing and onboarding new talent, contributing to the strengthening of the team and the hiring process.
- Revamped current processes to improve colleague experience, ensuring a seamless, user-friendly digital environment.
- Collaborated with cross-functional teams to ensure the Digital Colleague Workspace met the diverse and evolving needs of Barclays' employees.

## **Barclays, New Jersey, NJ, USA**

### **Solution Architect and Delivery Lead: Identity and Access Management**

**February 2018 – February 2023**

- Led and supported a globally distributed IAM Engineering & Support team of ~30 colleagues across APAC, UK, and the US, responsible for designing, developing, and supporting IAM toolsets, processes, controls, and change projects across the Barclays Group.
- Oversaw technical and operational governance of Logical Access Management (LAM) controls, ensuring robust security measures were implemented and maintained.

#### **Key Achievements:**

- Implemented a modular framework based on microservices architecture and best-of-breed open-source technologies, leading to the first enterprise-scale implementation of microservices at Barclays. This platform, fully cloud-enabled, introduced an "IAM as a Service" offering across the bank.

#### **Core Responsibilities:**

- **Strategy:** Defined and evolved the IAM services and product roadmap, ensuring Barclays maintained a robust control environment in a dynamic security landscape.
- **Architecture:** Designed, maintained, and improved IAM technology architecture using resilient, scalable, and modern technologies for optimal security operations.
- **Product Development:** Built the IAM product suite, incorporating complex integrations with enterprise systems and a multi-terabyte data layer optimized for security operations.

#### **Key Functions:**

1. **Design & Architecture:** Defined the architecture roadmap, designed, and built POCs to drive an industry-leading IAM framework utilizing modern technologies such as Cloud, Microservices, Graph Engines, Rules Engines, BPM, Analytics, Data Virtualization, and High Resiliency design.
2. **Core Engineering:** Led the core build function responsible for all product development and integrations with enterprise systems, including AD, SAP, CMDB, Directories, and Infrastructure.
3. **Data Feeds & Operations:** Managed the ingestion of multi-terabytes of daily data from thousands of application and infrastructure feeds, providing operational support.

4. **User Interface (UI/UX):** Designed, tested, and implemented user experiences for all IAM products, ensuring user-friendly and efficient interfaces.
5. **L2 & L3 Support:** Provided 24x7 technology and operations support for all IAM products and data flows, ensuring high availability and reliability.

**Tech Mahindra (Client: AT&T), Middletown, NJ**  
**Technical Architect**  
**May 2016 – February 2019**

- Served as a Technical Architect on the VTM (Virtual Trouble Management) project, which streamlined ticket management by consolidating multiple systems into a single, configurable platform.
- Introduced automation capabilities for ticket resolution and synchronization across different systems, significantly enhancing operational efficiency.

**Key Responsibilities:**

- **Requirements Analysis:** Collaborated with business analysts to define system requirements and perform Use-Case analysis, ensuring technical solutions were aligned with business needs and objectives.
- **Design & Architecture:** Played a pivotal role in the design and architecture of the VTM system, focusing on creating a robust, scalable, and efficient solution that met enterprise-level standards.
- **Backend Development:** Designed and developed backend services using Spring Integration for handling outbound and inbound gateways and implemented Spring Boot projects for CRUD operations in MongoDB.
- **RESTful Web Services:** Developed RESTful web services to facilitate external access to the VTM system, ensuring seamless integration with other platforms and enhancing system interoperability.
- **Camunda BPMN Implementation:** Designed and implemented Camunda BPMN workflows with supporting Java modules, enabling real-time execution of business rules and rapid adaptation to changing business requirements.
- **Business Rule Management:** Created DMN and BPMN diagrams, empowering business users to update rules in real-time. Deployed these updates on Test/UAT environments, ensuring rapid iteration and validation.
- **Cloud Integration:** Integrated Spring Boot and Spring Integration projects with cloud services, managing backend infrastructure, and deploying services on cloud servers to enhance scalability and reliability.
- **Data Synchronization:** Implemented Hibernate for synchronization between MongoDB (NoSQL) and MariaDB (SQL) databases, and developed synchronization jobs for maintaining data consistency across multiple databases.
- **JAX-B Integration:** Developed JAX-B based classes for processing and rendering Camunda-generated XML data on the graphical user interface (GUI).
- **Configuration Management:** Managed code configuration with GIT and SVN, ensuring rigorous version control and enabling collaborative development across teams.

- **CI/CD Pipeline:** Utilized Jenkins to automate the continuous integration and deployment (CI/CD) of Spring Boot projects, ensuring consistent and efficient deployment processes.
- **Microservices & Kubernetes:** Developed microservices architecture and managed deployment using Kubernetes and Docker, ensuring the system's scalability, flexibility, and ease of maintenance.
- **Message Queue Management:** Implemented Apache Kafka for efficient messaging between microservices, ensuring reliable communication, data flow, and system resilience.

## **Tech Mahindra (Client: AT&T), San Ramon, CA**

### **Senior Technical Specialist**

**March 2011 – May 2016**

- Played a pivotal role in the development and enhancement of the ISAAC WFE Application, providing troubleshooting capabilities to a diverse range of users, including customer care agents and direct customers via platforms such as Facebook, TV, iPad, and Android apps.

### **Key Responsibilities:**

- **Requirements Analysis:** Collaborated with business analysts to define requirements and perform Use-Case analysis, ensuring that the application met the needs of end-users and stakeholders.
- **Design & Architecture:** Contributed to the design and architecture of the ISAAC WFE Application, focusing on creating a robust and scalable solution.
- **JBPM Business Process Design:** Designed and developed business processes using JBPM, enabling streamlined and efficient workflows.
- **JAXB Implementation:** Implemented JAXB for converting objects to XML and vice versa, utilizing marshaling and unmarshaling concepts to facilitate data exchange.
- **BPMN 2.0 Workflows:** Worked closely with business clients to develop and implement interactive BPMN 2.0 workflows, enhancing the application's capability to guide users through troubleshooting steps.
- **REST Client Development:** Developed REST clients using javax.ws.rs.client to interact with other applications, ensuring seamless integration and data exchange.
- **SOAP Web Service Implementation:** Implemented SOAP web services using JAX-WS 2.x, enabling reliable communication between the application and backend systems.
- **OAuth Implementation:** Implemented OAuth for securing REST services, ensuring secure access to the application's functionalities.
- **JSON Processing with Jackson:** Utilized Jackson to convert JSON strings to maps, enabling efficient data manipulation and integration.
- **Database Interaction:** Worked with Hibernate 3.6 and Oracle 11G for XML mapping and database interactions, ensuring data integrity and performance.
- **Project Management with Maven:** Used Maven as the project management tool to streamline the build process and manage project dependencies.
- **Multi-Threading Implementation:** Implemented multi-threading for APIs to enhance data loading speed and improve query performance.

- **Backend System Integration:** Implemented backend system calls using WebLogic ODSI and OSB consoles, ensuring smooth communication with various systems.
- **Technical Documentation:** Prepared detailed technical specification documents to guide the development process and ensure clarity among stakeholders.
- **Client Support:** Provided ongoing support to business clients, including assistance with JavaScript and JQuery functions for workflow design.
- **Bug Fixes & Production Support:** Led quick turnaround efforts to resolve production issues, ensuring minimal disruption to users and maintaining system reliability.
- **Configuration Management:** Managed code configuration using SVN, ensuring version control and collaborative development.
- **Team Leadership:** Led a team of ten members, including eight offshore and two onsite, resolving development issues and ensuring project milestones were met.

### **NIIT Technologies Limited, Gurgaon, India**

#### **Senior Software Engineer**

**September 2007 – October 2009**

- Played a key role in the development and support of applications for Office Depot, a major retail domain client, supporting customer care agents, customers, and business clients.

#### **Key Responsibilities:**

- **Software Development:** Delivered changes using the waterfall model in Java, contributing to the enhancement of various applications that supported diverse customer needs.
- **Estimation and Planning:** Responsible for estimating and planning new activities, identifying both production and non-production application issues, and ensuring timely delivery of project milestones.
- **Technical Support:** Provided technical support and consultation for application-related questions, assisting both the development team and end-users.
- **Unit Testing:** Developed and executed unit test plans to ensure the functionality and reliability of the application code.
- **Testing Support:** Supported formal testing phases by resolving test defects and ensuring that the applications met the required standards before deployment.
- **Environment Management:** Established, refined, and integrated development and test environment tools and software as needed to optimize the development process.
- **Application Development:** Developed application code for Java programs, ensuring robust and efficient solutions for client needs.
- **Quality Assurance:** Conducted requirement analysis, developed test scenarios, and planned and executed automation testing using tools like Load Runner, QTP, QC, and JIRA.
- **Documentation:** Conducted walkthroughs to baseline newly designed documents and participated in peer review meetings to ensure accuracy and completeness of project documentation.

**NIIT Technologies, Gurgaon, India**  
**Software Developer**  
**September 2006 – September 2007**

- Played an integral part of the team tasked with migrating a legacy system to a modern Java web application for Kyouni Destination Management, a global tours and travel company.

**Key Responsibilities:**

- **Design and Development:** Collaborated with the development team in designing the application and gathered requirements in coordination with the product team, ensuring that the solution met business needs.
- **WebSphere Setup:** Worked closely with web administrators to create JVMs in WebSphere and set up the project across different environments, ensuring smooth deployment and operation.
- **Data Processing:** Developed stored procedures and business rules to efficiently process data, enabling accurate and timely updates to the application.
- **Multi-Threading Implementation:** Implemented multi-threading in APIs to enhance data loading speeds and improve query performance, contributing to a more responsive and efficient application.
- **J2EE Development:** Developed key J2EE components using IBM's Rational Application Developer (RAD), ensuring robust and scalable solutions for the application.
- **Logging and Debugging:** Utilized Log4j to implement logging facilities, providing a reliable way to monitor and debug the application during development and production.
- **Project Management with ANT:** Used ANT as the project management tool to automate the build and deployment process, streamlining the overall development workflow.
- **Application Deployment:** Configured and deployed the application on WebSphere Application Server within a Windows environment, ensuring a stable and secure production setup.

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### 3. Education

**Bachelor of Electronics and Instrumentation Engineering**

Apeejay College of Engineering, Sohna, Gurgaon, India  
Graduated: May 2005

**Three-Year Diploma in Computer Engineering**

Sir Chotu Ram Polytechnic, Rohtak, India  
Graduated: May 2005

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## 4. Certifications and Trainings

- **Machine Learning with Python** - IBM
  - **Service-Oriented Architecture** - University of Alberta
  - **Software Design and Architecture Specialization** - University of Alberta
  - **Introduction to Deep Learning with Keras** - IBM
  - **Introduction to Computer Vision and Image Processing** - IBM
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## 5. Publications

- **Machine Learning Techniques for Accurate Disease Prediction and Diagnosis – 2023**  
[Link](#)
  - **Neural Networks for Visual Question Answering Architectures and Challenges – 2023**  
[Link](#)
  - **Regulatory and Ethical Considerations in Bias Mitigation for Machine Learning Systems – 2023**  
[Link](#)
  - **Safe and Robust Reinforcement Learning: Strategies and Applications – 2023**  
[Link](#)
  - **Scalable Machine Learning Algorithms: Techniques, Challenges, and Future Directions – 2023**  
[Link](#)
  - **Techniques for Efficient Training of Large-Scale Deep Learning Models – 2023**  
[Link](#)
  - **Cloud Security Essentials for Java Developers: Protecting Data and Applications in a Connected World – 2024**  
[Link](#)
  - **Java in the Cloud: Best Practices and Strategies for Optimizing Code for Performance and Scalability – 2024**  
[Link](#)
  - **Developing AI-Powered Java Applications in the Cloud: Harnessing Machine Learning for Innovative Solutions – 2024**  
[Link](#)
  - **Identity and Access Management Integration with Enterprise Applications – 2024**  
[Link](#)
  - **Harnessing Cloud Computing for Enterprise Solutions: Leveraging Java for Scalable, Reliable Cloud Architectures – 2024**  
[Link](#)
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## 6. Patents

- Artificial Intelligence Based 3D Industrial Inspection Robot using Cloud (Pending)
- Design and Development of Rechargeable Robo Cleaner using OT Security Mapping system (Pending)

## 7. Recognitions

- **Winner of Global Recognition Award:** Recognized for exemplary contributions to digital transformation and IAM at Barclays.
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## 8. Professional Reviewer and Judge

- **Reviewer for the Transactions on Consumer Electronics (IEEE) - 2024**
  - **Reviewer for International Conference on Recent Innovations in Computing (ICRIC'07)**
    - Improved Deepfake Detection with Optimized Preprocessing for Low-Quality Images
    - De-Smoking and De-Hazing of images: Gated Fusion Network-Color Attenuation Prior (GFN-CAP) Algorithm
    - Evolution and Impact of Over-the-Top (OTT) Platforms on Viewers Perception and Engagement
    - Integrating Auxiliary Information to boost Recommender Systems using Generative Adversarial Networks
  - **Judge in Hackathon by Raptors.dev**
  - **Judge at Brandon Hall Excellence Award**
  - **Book Reviewer at Manning**
  - **Reviewer at INTERNATIONAL RESEARCH JOURNAL OF SCIENCE ENGINEERING AND TECHNOLOGY(Pending)**
  - **Mentor at ADPList**
  - **Author and reviewer at International Journal of Global Innovations and Solutions (IJGIS)**
  - **Conference speaking at International Journal of Global Innovations and Solutions (IJGIS)**
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## 9. Professional Affiliations

- **Fellow Member of iicspa**
- **Fellow Member of Raptors.dev**
- **Member of IEEE**
- **Member of IEEE Aerospace and Electronic Systems Society**
- **IEEE Systems Council**
- **Technical Committee on Distributed Processing (TCDP)**
- **Entrepreneurship Exchange Community, IEEE**



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## 10. Expertise and Skills

- **Enterprise-Scale System Design and Development**
- **IAM Strategy and Architecture**
- **Microservices and Cloud Technologies**
- **Open-Source Solutions**
- **Security Compliance and Audits**
- **Team Leadership and Management**
- **Complex Integrations and Product Development**

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## 11. Languages

- **English:** Fluent
- **Hindi:** Fluent