

BYRON ANDRANGO - ENGINEERING MANAGER



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SUMMARY

Results-driven technology leader with a proven track record of managing high-performing technical teams and delivering innovative cloud solutions, particularly on AWS. Offering a unique blend of technical expertise and strategic insight, with in-depth knowledge of architectural patterns and microservices, capable of designing and implementing scalable, efficient systems that meet evolving business needs. Known for the ability to lead and inspire cross-functional teams to excel in dynamic environments, capable of effectively bridging technical and business perspectives to ensure smooth collaboration across global teams. Brings extensive experience in solving complex challenges while maintaining a focus on continuous improvement, consistently seeking new ways to optimize processes and deliver value.

STRENGTHS



Software Architecture and Development

Expertise in designing and implementing complex systems, including virtual branches, payment engines, and hologram detection modules. Proficient in modernizing monolithic systems to microservices architecture, optimizing performance, scalability, and security.



Cloud Technologies and DevOps

Proficient in using Docker, Kubernetes, Azure, and CI/CD tools like Maven, Jenkins, and SonarQube. Expertise in implementing multi-tenant architectures, ensuring secure and efficient resource utilization for multiple clients.



Data Management and Optimization

Skilled in database design, migration, and optimization with Oracle, SQL Server, MySQL, and modern APIs. Improved performance and data retrieval through strategic data modeling and optimization techniques.



Team Leadership and Mentorship

Demonstrated leadership in managing and mentoring diverse, multicultural development teams across multiple projects. Successfully guided teams in delivering high-impact solutions, such as scalable notification systems and payment platforms.

EXPERIENCE SUMMARY

See the detailed experience on next page

Engineering Manager Solutions Architect	Digital Ecuador · Hybrid	Challengers	IT	2024 - 2025
Solutions Architect - Developer Tech Lead	iuivity (IT Consulting) Ecuador · Remote	Services and	IT	2012 - 2024
Developer Technical Lead	SidSolutions Quito, Ecuador			2010 - 2012

MAIN TECHNOLOGIES

Java	9/10
AWS	8/10

TECHNICAL SKILLS

Languages

Java, Kotlin, Python, SQL

Frameworks & Libraries

Spring, TensorFlow, Scikit-Learn, PyTorch, Keras, HTML, CSS, Javascript, NodeJS, Spring Boot, Spring Batch, Spring Actuator, Spring JDBC, JUnit, Mockito

Platforms

AWS, Azure, Docker, Kubernetes, Android, Oracle, SQL Server, MySQL

Tools & Others

Maven, Jenkins, SonarQube, Bitbucket, Git, CI/CD, Adaptor, PTS, Clean Code, SOLID

CERTIFICATIONS

- MASTER 'S DEGREE IN ARTIFICIAL INTELLIGENCE - UNIR(Universidad Internacional de La Rioja), Spain, 2022 - 2023.

DETAILED EXPERIENCE

Engineering Manager | Solutions Architect

2024 - 2025 - Ecuador · On-site

Digital Challengers IT

Project A – Blu 2.0 BIAN Services

Engineering Manager / Solutions Architect

- Led the transformation of Diners Club's service architecture by transitioning existing services to the BIAN standard, with the strategic goal of monetizing services and enabling third-party consumption. These services will be exposed to the channel layer (web, mobile, and third-party integrations) for seamless consumption. This initiative includes the migration of services to AWS Cloud, leveraging a Top-Down methodology for BIAN standard implementation to optimize service processes. The project aims to enhance the performance of current services while creating new revenue streams through service monetization.
- Driving the analysis and migration of 250 services from an IBM bus to a microservices architecture deployed on AWS EKS, following the Strangler Fig pattern to ensure a seamless and incremental transition. This strategic modernization initiative enhances scalability, ensures high reliability, and aligns with the organization's digital transformation objectives while adhering to global banking standards.

Technologies used

Java 21, Spring Boot, Quarkus, Mockito, JUnit, Docker, Kubernetes, Oracle, Redis, Git, AWS (IAM, VPC, CDN, Route 53, ELB, CodePipeline, CloudFormation, CodeBuild, CodeDeploy, S3, EC2, RDS, Lambda, EKS, Secrets Manager), SonarQube, Nexus, AzureDevOps, Microservices, Scrum-Agile, Clean Code, SOLID, TDD, Code Reviews.

Project B - Notification Center

Engineering Manager / Solutions Architect

- Spearheaded the modernization of the current notification center, previously reliant on IBM AS400 logic (Gestor), where adding new clients required complex and time-consuming modifications to AS400 services. The new design eliminates these inefficiencies by introducing a flexible and scalable architecture.
- Implemented an event-driven architecture leveraging Kafka for seamless communication and deploying microservices on AWS EKS. This approach ensures enhanced performance, end-to-end traceability, and robust monitoring capabilities across all processes.
- Designed microservices to integrate with third-party providers for delivering notifications via email, SMS, push, and WhatsApp messages. This setup improves reliability and streamlines communication workflows.
- Developed an administrative module in React to enable rapid and secure configuration and management of new clients. This user-friendly interface empowers authorized personnel to manage settings effortlessly, enhancing operational efficiency while maintaining strict access control measures.

Technologies used

Java 21, Spring Boot, Mockito, JUnit, Docker, Kubernetes, Oracle, Redis, Git, AWS (IAM, VPC, CDN, Route 53, ELB, CodePipeline, Kafka, CloudFormation, CodeBuild, CodeDeploy, S3, EC2, RDS, EKS, Secrets Manager), SonarQube, Nexus, AzureDevOps, Prometheus, Grafana, Microservices, React, Scrum-Agile, Clean Code, SOLID, TDD, Code Reviews.

Solutions Architect - Developer | Tech Lead

2012 - 2024 - Ecuador · Remote

iuivity (IT Services and IT Consulting)

Project A - Banking and Virtual Branch for Individuals and Businesses

Developer

- Spearheaded the creation of virtual branches for major banks across Colombia and Central America, providing over 5 million users with the ability to perform essential banking tasks such as opening accounts and managing transactions remotely.
- Implemented a secure and reliable platform using JSP for dynamic server-side rendering and Bootstrap for a modern, responsive user interface, streamlining access to banking services and resulting in a 25% increase in digital service adoption.
- By enabling users to complete transactions remotely, this solution improved transaction processing times by 35%, enhancing the overall user experience and contributing to the digital transformation of financial institutions throughout the region.

Technologies used

JSP, Bootstrap, Java 8 (SpringMVC), JSP(Bootstrap), Oracle, PostgreSQL, SVN, Jenkins, SonarQube, Nexus, Jira, Confluence, Hexagonal Architecture, Clean Code, SOLID, TDD, Code Reviews

Project B - Campaign Delivery Module

Tech Lead / Solutions Architect

- Spearheaded the design and implementation of a highly scalable notification module for major banks across Colombia, Central America, the United States, and internal projects at Iuvity.
- This system empowered millions of users to receive critical communications in real-time via email, push notifications, and SMS.
- Optimized delivery times and reduced operational costs by implementing a high-performance notification module that enhanced communication systems for banking clients.
- Led and mentored a diverse team of 4 developers from various countries, each contributing unique perspectives to the development of key features such as push notifications.
- Implemented a multitenant architecture that enabled multiple banks and financial institutions to securely utilize the same notification system while maintaining data isolation for each client.
- Developed the administrative module using React for dynamic, component-based front-end development and Tailwind CSS to ensure a modern, responsive, and visually appealing user interface. This module allowed efficient management of notification configurations, enhancing usability and streamlining operations for banking clients.

Technologies used

React, Tailwind CSS, Java 17 (Spring Boot, Spring Batch, Spring Actuator, Spring JDBC, JUnit, Mockito), ActiveMQ, Docker, Kubernetes, Oracle, Redis, Git, AWS (IAM, VPC, CDN, Route 53, ELB, CodePipeline, CloudFormation, CodeBuild, CodeDeploy, S3, EC2, RDS, Lambda, EKS, Secrets Manager), SonarQube, Nexus, Jira, Confluence, Microservices, Scrum-Agile, Clean Code, SOLID, TDD, Code Reviews.

Project C - Payment Engine Module

Tech Lead / Solutions Architect

- Led the transformation of Iuvity's payment solutions, designing and implementing an advanced payment engine that empowered millions of users across major banks in Colombia, Central America, and the United States to perform secure, real-time transactions.
- Reduced transaction processing times by 50% through a focus on both security and performance, ensuring full compliance with stringent industry security standards.
- Implemented a robust multitenant architecture, enabling multiple banks to securely operate on the same payment platform while maintaining strict data segregation and custom configurations for each institution.
- Served as technical lead for a diverse, multicultural team of 8 members across multiple countries, mentoring and guiding developers throughout the entire project lifecycle.

Technologies used

Java 17 (Spring Boot, Spring Batch, Spring Actuator, Spring JDBC, JUnit, Mockito), NodeJS (npm), ActiveMQ, Docker, Kubernetes, Oracle, Redis, SQL Server 2014, Git, AWS (IAM, VPC, CDN, Route 53, ELB, CodePipeline, CloudFormation, CodeBuild, CodeDeploy, S3, EC2, RDS, Lambda, EKS, Secrets Manager), SonarQube, Nexus, Jira, Confluence, Microservices, Scrum-Agile, Clean Code, SOLID, TDD, Code Reviews.

Project D - Hologram Detection Module

Tech Lead / Developer

- Led the development of an innovative identity verification solution, improving the user experience for millions of banking customers in Colombia.
- This solution enhanced security and reduced in-person branch visits by 45%, streamlining processes and saving users an average of 2 hours per transaction.
- The system was thoroughly tested and validated on real-time mobile applications, delivering a smooth, reliable user experience across both Android and iOS platforms.

Technologies used

Azure, Python, OpenCV, TensorFlow, Kotlin, SwiftDocker, Kubernetes, Oracle, SQL Server, Git, Nexus, Jira, Azure Pipelines, Confluence, Microservices, Scrum-Agile, Clean Code, SOLID, TDD, Code Reviews.

Project E -Modernization - 400 APIs

Solutions Architect / Developer

- Led the comprehensive migration from monolithic components to a microservices architecture, modernizing the system to significantly enhance both security and performance.
- This transformation eliminated legacy dependencies, streamlined operations, and improved system responsiveness by 40%, ensuring millions of users benefit from faster, more secure services.
- Refactored and upgraded over 400 APIs supporting critical banking functions such as entitlement validation, user management, payments, and auditing.
- Served as both architect and developer, driving the modernization process by refactoring key modules and optimizing

workflows.

- Implemented a multitenant architecture that enables multiple clients to operate in isolated environments, maximizing resource efficiency and ensuring data security for each tenant.

Technologies used

Java 17 (Spring Boot, Spring Batch, Spring Actuator, Spring JDBC, JUnit, Mockito), ActiveMQ, Docker, Kubernetes, Oracle, Redis, Git, AWS (IAM, VPC, CDN, Route 53, ELB, CodePipeline, CloudFormation, CodeBuild, CodeDeploy, S3, EC2, RDS, Lambda, EKS, Secrets Manager), SonarQube, Nexus, Jira, Confluence, Microservices, Scrum-Agile, Clean Code, SOLID, TDD, Code Reviews.

Test Automation Module

Solutions Architect / Tech Lead / Developer

- Led the strategic design and implementation of a cutting-edge test automation framework, transforming the quality and speed of testing across high-impact banking projects.
- Revolutionized the bug detection process, integrating the automation framework fully into CI/CD pipelines.
- This test automation initiative accelerated development timelines by 30%, enabling continuous testing and real-time feedback.
- With the ability to run hundreds of test cases in parallel, QA teams validated new features and fixes instantly across multiple environments.

Technologies used

Karate, Cucumber, AWS (IAM, VPC, CDN, Route 53, ELB, CodePipeline, CloudFormation, CodeBuild, CodeDeploy), ActiveMQ, Docker, Kubernetes, Oracle, Redis, Git, AWS CodePipeline, SonarQube, Nexus, Jira, Confluence, Microservices, Scrum-Agile, Clean Code, SOLID, TDD, Code Reviews.

Developer | Technical Lead

2010 - 2012 - Quito, Ecuador

SidSolutions

- Led a team of 3 in managing a complex data and process migration at Tracklink, transitioning from one database system to another.
- This migration significantly improved accounting information processing, increasing data retrieval speed by 35% and enhancing accuracy for 150 internal users.
- Strategic database optimization and refined data structures reduced response times by 40%, resulting in a marked improvement in operational efficiency and overall user satisfaction.
- Designed and implemented a customized CRM system tailored to streamline internal operations and enhance client management processes at Tracklink.
- Designed and implemented a customized CRM system with a front-end developed using JSP, JavaScript, and CSS, tailored to streamline internal operations and enhance client management processes at Tracklink.
- The CRM system integrated customer data with real-time vehicle tracking information, resulting in a 30% improvement in service response times and better visibility into client interactions.
- This solution also optimized resource allocation for vehicle tracking and management, leading to more efficient operations and improved decision-making across the business.

Technologies used

JSP, JavaScript, CSS, Java 6, MySQL, SQLServer 2008 R2, Clean Code, SOLID.