Juan David Mercado López

Backend developer with experience in full-stack roles.

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About me

I am a backend developer with experience in full-stack roles, passionate about building scalable, efficient, and maintainable software solutions. My expertise includes designing robust system architectures, implementing design patterns, and writing clean, high-quality code. I focus on optimizing performance, ensuring security, and maintaining best practices in software development.

Work

January 2024 – Present

Freelancer

Freelance Software Developer

The services offered cover the entire software lifecycle, from planning, analysis, design, and implementation to testing, installation/deployment, usage, and maintenance. In this final stage, technical support is provided, including corrective and evolutionary maintenance to ensure system stability and continuous improvement.

Additionally, audits and operational process reviews are conducted to identify risks such as material loss, fund mismanagement, billing errors, poor inventory control, and low productivity. Through systematization and efficient management, resources are optimized, decision-making is improved, and regulatory compliance is ensured, making the business more profitable, scalable, and sustainable.

Although physical infrastructure is not the primary focus, some clients have requested support in this area. Depending on the complexity of the issue, I can offer direct assistance or coordinate with external specialists to ensure an efficient solution. Additionally, cloud migration services are available, providing optimized and scalable solutions tailored to the business's needs.

Project Managers, Tech Leads, Direct Supervisors, Clients, or Partners - Contact Information

Gustavo Laurens	Client/Partner	(+57) 301 529 9424

December 2020 – December 2023

Michael Page International, Colombia

Senior Backend Developer

Aval Digital Lab is the digital laboratory of Grupo AVAL, a banking group in Colombia. The projects developed for this client were for Banco Popular and DALE, a digital wallet.

1. Banco Popular: Multiple projects were developed within a work cell focused on creating common functionalities in the

cloud using a Serverless architecture. These functionalities allowed different teams to integrate efficiently, avoiding the existence of versions created by different teams to solve the same need and ensuring greater consistency within the ecosystem. Other projects consisted of system integrations and process automation.

Functions:

- Implementation of Step Functions for service orchestration in process flows.
- Development of AWS Lambda functions using Micronaut Framework to create scalable and efficient services.
- Integration of API Gateway with AWS Lambda and Step Functions for managing and exposing secure APIs.
- Configuration management and secure parameter storage using AWS Systems Manager Parameter Store.
- Minor modifications and adjustments in Amazon Cognito configuration for user authentication.
- Configuration of AWS WAF to strengthen application security, without deep development in this area.
- Application architecture design, ensuring scalability, maintenance, and efficiency in systems.

Technologies: Java 1.8, Java 11, AWS Step Functions, Micronaut Framework, API Gateway, AWS Lambda, Amazon S3, AWS Systems Manager Parameter Store, AWS IAM, Amazon Cognito, AWS WAF, Terraform, Jenkins, CI/CD, Git.

2. DALE: The project consisted of building a payment gateway using microservices architecture and reactive programming in Java.

Functions:

- Development of microservices with Spring Boot to ensure modularity and scalability.
- Secure exposure of microservices through Amazon API Gateway.
- Implementation of authentication and authorization with Spring Security and JWT.
- Orchestration and deployment of microservices on Amazon EKS.
- Performance optimization using caching with Redis.
- Configuration of AWS CloudFront to improve content distribution and latency.
- Secure credential and parameter management with AWS Secrets Manager.
- Infrastructure automation with AWS CloudFormation for efficient deployments.
- Design and optimization of microservices-based architecture.

Technologies: Java 11, Spring Boot 2, Spring Security, JWT, Amazon EKS, Redis, DynamoDB, AWS CloudFront, AWS Secrets Manager, AWS CloudFormation.

Common Functions: Banco Popular/DALE

- Data management using DynamoDB as a scalable NoSQL database.
- Data storage and management in Amazon S3, optimizing availability and security of information.
- Administration of roles, permissions, and policies with AWS IAM, ensuring proper access management in services.
- Definition and management of infrastructure as code with Terraform, ensuring reproducible and scalable deployments.
- Deployment automation with Jenkins, executing CI/CD pipelines.
- Implementation of CI/CD strategies, optimizing continuous software delivery.
- Development and execution of unit tests, ensuring code quality and preventing regressions.
- Code review to ensure best practices and development standards.
- Use of Git for version control and branch management in collaborative environments.

3. Liberty Seguros: Liberty Seguros is an insurance company that is part of Liberty Mutual Insurance Group. A project was carried out to migrate process flows from SOA 12c to a REST services architecture implemented in Java 8. The final product was an ecosystem of applications that contained REST APIs, which ensured the correct functioning of all the systematized business processes.

Functions:

- Migration of SOA 12c process flows to a hexagonal REST architecture implemented in Java 8 with Spring Boot.
- Development and exposure of secure REST APIs using Spring Boot and JWT, ensuring authentication and authorization.
- API security with JWT, implementing authentication and authorization using tokens to guarantee secure access to endpoints.
- Containerization and deployment of the application using Docker, ensuring portability and scalability.
- Adaptation of SOA 12c SQL queries for integration into the new Spring Boot architecture, ensuring correct interaction with Oracle Database.
- Implementation of infrastructure as code with AWS CloudFormation to manage cloud resources in an automated manner.

- Deployment automation with Serverless Framework and Jenkins, ensuring continuous integration and delivery (CI/CD).
- Version control management and development collaboration using Git.

Technologies: Java 1.8, Spring Boot 2, JWT, SOA 12c, Jenkins, Docker, AWS CloudFormation, Oracle Database.

Project Managers, Tech Leads, Direct Supervisors, or Clients - Contact Information

Oscar Mellizo	Software Architect – Aval Digital Lab	(+57) 310 565 8932
Gabriel Andrés Useche	Software Architect - DALE	(+57) 313 888 9831
Ricardo Andrés Perdomo	Tech Lead – Liberty Seguros	(+57) 320 232 7602

Octuber 2020 – November 2020

PersonalSoft, Colombia

Software Engineering Analyst

In this company, I participated in a Java application migration project, which included upgrading WebLogic Server to the latest version available that year. To ensure the proper functioning of the applications, incident resolution activities and test execution were carried out.

Functions:

- Migration of source code from Java 1.6 to Java 1.8 and upgrade of WebLogic Server, ensuring compatibility and resolving incidents arising from the version adjustment. Adjustments were made to applications developed with Java Server Faces (JSF) and components using the Spring Framework.
- Execution of pipelines in Jenkins, facilitating the continuous integration and deployment of applications.
- Updating and managing Java libraries used by the applications, ensuring compatibility with the new Java version.

Technologies: Java 1.6, Java 1.8, WebLogic Server, Jenkins, Java Server Faces, Spring Framework.

Project Managers, Tech Leads, Direct Supervisors, or Clients - Contact Information

Yovanny Mena	Direct Supervisor	(+57) 300 746 5644

January 2019 – February 2020

Enterprise's Improvements, Colombia

Senior Java Developer (Contractor)

I participated in a project to systematize process control in jewelry manufacturing, from receiving the purchase order to delivering the final product to the buyer.
The solution optimized the management of each stage, improved order traceability, and reduced the risk of losing valuable materials such as gold and silver. The project was developed in three phases, and from the beginning of the second phase, I took on the role of technical lead. I was involved in the entire software development lifecycle, from gathering requirements and selecting technologies to designing the architecture, implementation, and certification testing. Additionally, I supervised pilot testing after delivery and managed incident resolution to stabilize the system and ensure its proper functioning.

Functions:

- Development of backend services using Java and Spring Boot for API REST implementation.
- Creation of the frontend based on a template, adapting the user interface to project requirements.
- Integration of the backend with the frontend to ensure data flow between the user interface and system services.
- Database design to structure information according to system requirements.
- Management of database communication using Spring JPA, facilitating the execution of queries and stored procedures in SQL Server.
- Creation of scripts for generating tables in the database engine.
- Application security design based on roles, ensuring access control to functionalities according to assigned permissions.
- Implementation of authentication and authorization using JWT to protect system services.

- Consumption of SOAP services for integration with the ERP Siesa, enabling data synchronization.
- Development of integrations with the ERP Siesa to manage billing, inventory, and control of valuable materials such as gold and silver.
- Construction of dynamic views with Thymeleaf for presenting information in the user interface.

Technologies: Java 1.8, Spring Boot, Spring JPA, SQL Server, JWT, Thymeleaf, SOAP Services, API REST, ERP Siesa

Project Managers, Tech Leads, Direct Supervisors, or Clients - Contact Information

José Mendoza	Project Manager	(+57) 301 673 3858

May 2018 – December 2018

Banco Serfinanza, Colombia

Senior Systems Analyst

During my second tenure at the company, I worked in the technology department, where I led various projects while participating in the implementation of new applications and functionalities, as well as providing technical support.

Functions:

- Management and leadership in the migration project of the payroll and human resources software with the external provider Novasoft.
- Implementation of system integrations and APIs using the IBM Integration Bus.
- Development and support of internal systems, using .NET, .NET Core, and Java with Spring Boot and the Java Server Faces framework.
- Execution of functional and certification testing to ensure the quality and proper functioning of applications.
- Deployment of applications in testing and production environments.
- Corrective and evolutionary support, ensuring software stability and continuous improvements.

Technologies: C#, .NET, .NET Core, Java, Spring Boot, Java Server Faces, IBM Integration Bus, REST APIs, SOAP.

Project Managers, Tech Leads, Direct Supervisors, or Clients - Contact Information

Leonardo Campo	IT Director	(+57) 321 568 7326

February 2017 – March 2018

Equifax, Chile

Senior Java Developer

During my time at the company, I was responsible for implementing various projects, primarily focused on creating REST APIs to facilitate communication between internal systems and different banking entities, such as Banco de Chile and Banco Santander. I had the opportunity to lead a key project for extending one of the company's main services: address verification, which is widely used by financial institutions in the country. This project involved integrating Equifax's systems with those of two additional providers as part of a commercial partnership. Additionally, I participated in the development of automated processes for the company's product billing and in the evolutionary maintenance of internal applications. On several occasions, I provided support to the technical support area, assisting in resolving incidents in production applications.

Functions:

- Corrective and evolutionary support for the verification system developed in Java 1.4.
- Implementation of new services in Java 1.8, exposed to address verification providers and secured with Spring Security and OAuth2.
- Development of services for integration with financial institutions, implementing OAuth2 to ensure secure communications.
- Use of Pentaho for the creation and automation of billing processes.
- Application architecture design and implementation of web applications using Spring Boot.

- Creation of complex database queries for efficient information processing and optimization.
- Evolutionary support for applications developed in Java 1.6 and Java 1.8, using Spring Framework and Spring Boot-based applications.
- Documentation of developments and adjustments made, ensuring traceability and team understanding of the code.
- Leadership in the implementation of improvements and key projects, coordinating teams and ensuring the achievement of technical objectives.

Technologies: Java 1.4, Java 1.6, Java 1.8, Spring Boot, Spring Framework, Spring Security, OAuth2, Pentaho, REST APIs, Oracle Database.

Project Managers, Tech Leads, Direct Supervisors, or Clients - Contact Information

Patricio Coloma	Project Manager	(+56) 9 9824 9565

August 2015 – November 2016

Serfinansa (Banco Serfinanza), Colombia

Systems Analyst

During this period, I was mostly involved in activities related to the company's conversion project into a bank. I also participated in the development of the money transfer service with the retail chain Olímpica, its commercial partner, and was responsible for technical support after its launch, assisting in incident resolution until the product was stabilized.

Functions:

- Collaboration in the implementation of an application developed in Java 1.8 for the integration of new banking functions and its connection with the Core Banking system, using Java Server Faces as a framework.
- Integration with internal and external systems through SOAP services, REST APIs, MQ queues, and data frames, according to the requirements of each integration.
- Creation of reports for various products using the Apache POI library.
- Programming of cyclic processes using the Quartz library for task automation.
- Development of an application for parameter management and report generation for the money transfer service, using Angular for the frontend and REST API for backend communication.
- Implementation of integrations to optimize communication with the retail chain Olímpica's systems through the CERP Software integration tool in the money transfer service.
- Diagnosis and resolution of incidents in the money transfer service, ensuring its operational continuity and correct functioning.

Technologies: Java 1.8, Java Server Faces, Angular, SOAP, REST API, MQ, Quartz, Apache POI, CERP Software Integration Tool, SQL Server, DB2.

Project Managers, Tech Leads, Direct Supervisors, or Clients - Contact Information

Carol Diaz	Direct Supervisor	(+57) 350 438 0455
Margie Ojeda	Tech Lead	(+57) 320 565 9195

April 2013 – August 2015

I2B Technologies, Colombia

Java Consultant

In this experience, I had the opportunity to participate in a project for Santiago de Chile Airport, where the company Maxximiza required a solution to control the flow of vehicles within the airport. Additionally, I collaborated in the delivery of two prototypes for Entel Chile, participated in a rebranding process for Entel Perú, and provided technical support for Entel Chile's commercial platforms.

Functions:

- Collaboration on development projects using frameworks such as Java Server Faces, Spring, and Struts.
- Implementation of new functionalities in applications for various clients.

- Diagnosis and resolution of incidents in commercial platforms developed with frameworks such as Java Server Faces and Spring, and databases like Oracle Database.
- Implementation of prototypes using technologies from the Oracle WebCenter suite, including Oracle WebCenter Portal and Oracle WebCenter Sites.
- Configuration of environments with Oracle WebCenter Interaction for a rebranding project.
- Execution of functional testing to ensure software quality.
- Preparation of technical and functional documentation.

Technologies: Java 1.6, Java Server Faces, Spring Framework, Struts, Oracle Database, Oracle WebCenter Portal, Oracle WebCenter Sites, Oracle WebCenter Interaction, JavaScript, jQuery.

Project Managers, Tech Leads, Direct Supervisors, or Clients - Contact Information

Yassir Barceló	Tech Lead	(+57) 316 832 4596
Gonzalo Castro	Tech Lead	(+57) 301 259 1747

Education

January 2013

Universidad Autonoma del Caribe (Barranquilla, Colombia)

Ingeniería de sistemas (Systems engineering)

ID	SNIES 2801
Verify	To verify the authenticity of this certificate, you may request documents such as the diploma or graduation certificate, consult directly with the institution, or verify with the government entity that regulates education, the Ministerio de Educación Nacional.

May 2021

Udemy

Aprende Unit Test en Java con Junit 5 y Mockito

ID	UC-483d5934-b42d-4391-865e-3e07c52b6609
Verify	https://www.udemy.com/certificate/UC-483d5934-b42d-4391-865e-3e07c52b6609/

February 2020

Udemy

Desarrollo web con Spring Boot de cero a ninja

ID	UC-8de7e7e4-747f-4fa1-b822-a8fd7de87954
Verify	https://www.udemy.com/certificate/UC-8de7e7e4-747f-4fa1-b822-a8fd7de87954/

July 2019

CertMind

Scrum Product Owner

ID	138907138
Verify	https://certmind.org/platform/public/index.php/validate-e-cert

December 2018

CertMind

Scrum Master

ID	621357404
Verify	https://certmind.org/platform/public/index.php/validate-e-cert

CertMind

Scrum Fundamentals
  ID   878611341
  Verify   https://certmind.org/platform/public/index.php/validate-e-cert

PeopleCert

Itil Foundation
  ID   GR750437197JM
  Verify   https://www.peoplecert.org/for-corporations/certificate-verification-service

Capabilities

- Software Architecture
- Design Patterns
- Cloud Development & Integration
- Microservices & Distributed Systems
- SOLID Principles & Clean Code
- API Development & Integration
- Database Design & Optimization
- CI/CD & DevOps Practices
- Testing & Quality Assurance
- Security Best Practices
- Agile & Scrum Methodologies
- Scalability & Performance Optimization
- Serverless Architecture
- Containerization & Orchestration
- Team Leadership & Collaboration
- Frontend & Backend Integration
- Web Application Development
- State Management & Client-Side Performance
- Mobile Application Development