

# Jonathan Monsalve

Mexico City, Mexico

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## Summary

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Engineering Manager and Systems Engineer with over 10 years of experience in programming and designing diverse computer systems. Passionate about creativity and innovation, embracing the philosophy that continuous improvement is always possible. Believes that in today's fast-paced world, adaptability and the speed of change are crucial. Strong background in web development and Unix-based operating systems, skilled in multidisciplinary teamwork, version control, planning, and rigorous quality control. Committed to staying at the forefront of technology, constantly learning and adapting to new advancements.

## Skills

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- **Languages:** Ruby, Python, Golang, JavaScript
- **Frameworks:** Ruby on Rails, Django, FastAPI, Flask
- **Backend Development:** RSpec, Docker, CI/CD Pipelines, TDD
- **Cloud & DevOps:** AWS (Lambda, DynamoDB, S3, API Gateway, EventBridge, Kinesis, Kafka), CDK, Linux Self-Hosting, Serverless Architectures
- **Database Technologies:** MySQL, PostgreSQL, MongoDB
- **Frontend & UI Frameworks:** HTML, CSS, JavaScript, Bootstrap, AngularJS
- **Soft Skills:** Leadership, Communication, Team Building, Conflict Resolution, Decision-Making, Strategic Planning, Adaptability

## Professional Experience

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**Quantum / Camino Financial**  
*Engineering Manager*

*Oct 2021 - Aug 2024*  
*Mexico City, Mexico & USA*

- Hired and developed an engineering team, fostering a culture of technical rigor and continuous improvement.
- Led a system design overhaul by migrating from a monolithic system to a microservices architecture using AWS serverless components, reducing feature development time significantly.
- Implemented Test-Driven Development (TDD), continuous integration, and continuous deployment practices, enhancing code quality and speed to delivery.

**Covalto**  
*Back-end Developer*

*Jan 2020 - Oct 2021*  
*Mexico City, Mexico*

- Contributed to the backend development of web-based credit card products, advancing Covalto's transition into a full-fledged financial institution in Mexico.
- Developed tailored credit solutions for restaurants with Uber Eats during the COVID-19 pandemic, showcasing problem-solving and adaptability.

- Increased responsibilities through demonstrated technical expertise and successful delivery of crucial backend projects.

**RunaHR**  
Back-end Leader

May 2019 - Dec 2019  
Mexico City, Mexico

- Joined as an early employee and developed a payroll product, securing over 300 clients in the first year.
- Promoted to Back-end Leader, scaling the company to support over 2,000 businesses with approximately 5,000 employees.
- Created and managed five agile squads to support rapid growth.

**RunaHR**  
Back-end Developer

Jun 2018 - May 2019  
Mexico City, Mexico

- Developed core features for the payroll system, contributing to the company's initial product launch.
- Implemented authentication and authorization systems, enhancing application security.

**Cleteci Panamá S.A.**  
Technical Leader

Oct 2017 - May 2018  
Remote

- Led a team in developing a comprehensive system for travel agents to manage services like flights, hotels, car rentals, and other vacation services.
- Evangelized modern development practices including cloud computing, containerization, automated testing, and CI/CD pipelines.
- Implemented continuous deployment pipelines, enabling frequent and reliable software releases.

**GN Marketing Inc**  
Full-stack Developer

Aug 2015 - Sep 2017  
Remote, USA

- Developed and led a location-based advertising product, delivering notifications based on users' geographic positions.
- Pioneered the use of Docker for continuous integration and deployment, enhancing development workflows.
- Managed self-hosted Linux servers and improved system architecture.

**Biosoft C.A.**  
Full-stack Developer

Oct 2014 - Jul 2015  
Mérida, Venezuela

- Developed and maintained web applications, focusing on login, authentication, and authorization systems.
- Created reusable software components like dynamic forms, document management tools, and workflows using Petri nets.
- Contributed to server management and deployment processes on Linux self-hosted environments.

**Call & Call Mercadeo Directo C.A.**  
Full-stack Developer

May 2014 - Sep 2014  
Mérida, Venezuela

- Developed web systems enabling contact center operators to efficiently record call results.
- Built data analysis and quality control tools, improving client reporting for major Venezuelan companies.
- Managed servers and ensured the reliability of web applications in a Red Hat Linux environment.

## Education

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### Systems Engineering

Universidad de Los Andes

*11/2006 – 04/2013, Mérida, Venezuela*

Thesis: "Challenge to Complexity: BRAIN-CEMISID version 1.0. Design of an Operational Kernel for Constructing a Kernel-Brain in Parallel Programming using CUDA."

## Training and Courses

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- Mastering the System Design Interview, Sundog Education by Frank Kane, Udemy, Sept 2024
  - AWS Lambda and the Serverless Framework - Hands On Learning!, Paulo Dichone, Udemy, March 2023
  - Build a Backend REST API with Python & Django - Beginner, Mark Winterbottom, Udemy, August 2020
  - High Performance Computing: From Theory to Practice, Ph.D. Juan Guillermo Gonzales, Accelogic, December 2014
  - Multicores and Multithreading Architectures, Francisco Tirado, September 2013
  - Parallel Programming with Abstractions, David Padua, October 2013
  - Computer Science 101: Introduction to Computer Science, Sebastian Thrun, Udemy, April 2012

## University Projects and Recognitions

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- **Analog Hydraulic System Emulator:** Designed and implemented an analog prototype in MATLAB to control the water level in a tank.
  - **Cultural Dictionary of the Andean Páramo:** Developed a PHP web project to document animal species and flora; recognized at the university's annual fair.
  - **MASTER FLAT Generator for IRAF:** CUDA-based project for transforming space images.
  - **Source Code Converter:** Developed a Bison/Flex-based converter to transform C code to Python as part of a compilers course.
  - **WireFish Network Analyzer:** Designed a TCP/IP traffic analyzer inspired by Wireshark, using C++ and Qt.
  - **Cleda-plugin Development:** Created a plugin system for the Cleda Framework using XML, Echo3, Java, and Hibernate; awarded at the university's business fair.