

Jonathan Monsalve

Engineering Manager & Systems Engineer

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Summary

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.

Professional Experience

Engineering Manager

Quantum / Camino Financial

10/2021 – 08/2024, Mexico City, Mexico & USA

Tech Stack: AWS Serverless (Lambda functions, DynamoDB, AuroraDB, Step Functions, EventBridge, S3, SQS), CDK, Django, FastAPI, MySQL, Python

- Successfully hired and developed a complete engineering team, fostering a culture of innovation and continuous improvement.
- Led the migration from a legacy monolithic system to a microservices architecture using AWS serverless components, reducing feature development time from months to weeks.
- Advocated for the adoption of Test-Driven Development (TDD), continuous integration, and continuous deployment practices.

Back-end Developer

Covalto

01/2020 – 10/2021, Mexico City, Mexico

Tech Stack: Golang, Flask, Django, Python

- Backend development for credit card products, contributing to Covalto's transition into a full-fledged bank in Mexico.
- Implemented credit solutions for restaurants in collaboration with Uber Eats during the COVID-19 pandemic.
- Recognized for outstanding performance, leading to expanded responsibilities and successful delivery of critical projects.

Back-end Leader

RunaHR

05/2019 – 12/2019, Mexico City, Mexico

Tech Stack: Ruby on Rails, AWS, Heroku, Docker, MongoDB, PostgreSQL

- 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.

Back-end Developer

RunaHR

*06/2018 – 05/2019, Mexico City, Mexico**Tech Stack: Ruby on Rails, Docker, MongoDB, PostgreSQL*

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

Technical Leader

Cleteci Panamá S.A

*10/2017 – 05/2018, Remote**Tech Stack: Ruby on Rails, AngularJS, AWS, Docker, GitHub*

- 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.

Full-stack Developer

GN Marketing Inc

*08/2015 – 09/2017, Remote, USA**Tech Stack: Ruby on Rails (Server-Side Rendering), JavaScript (Vanilla), RSpec, Docker, Bootstrap, Linux Self-Hosting*

- 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.

Full-stack Developer

Biosoft C.A.

*10/2014 – 07/2015, Mérida, Venezuela**Tech Stack: Ruby on Rails (Server-Side Rendering), JavaScript, Bootstrap, Linux Self-Hosting*

- 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.

Full-stack Developer

Call & Call Mercadeo Directo C.A

*05/2014 – 09/2014, Mérida, Venezuela**Tech Stack: PHP, MySQL, JavaScript, Red Hat Linux Servers*

- 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.
- Collaborated closely with clients to understand their products and tailor solutions accordingly.
- Managed servers and ensured the reliability of web applications in a Red Hat Linux environment.

Education

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

- Mastering the System Design Interview, Sundog Education by Frank Kane, Udemy, 06/2023
- AWS Lambda and Serverless Framework, Paulo Dichone, Udemy, 03/2023
- Build a Backend REST API with Python & Django, Mark Winterbottom, Udemy, 08/2020
- High Performance Computing: From Theory to Practice, Ph.D. Juan Guillermo Gonzales, Accelogic, 12/2014
- Multicores and Multithreading Architectures, Francisco Tirado, 09/2013
- Parallel Programming with Abstractions, David Padua, 10/2013
- Computer Science 101: Introduction to Computer Science, Sebastian Thrun, Udemy, 04/2012

Skills

Languages: Spanish (Native), English (Proficient)

Technical Skills: AWS, CDK, Docker, Git, Python, Django, FastAPI, Flask, Ruby on Rails, Golang, MySQL, PostgreSQL, MongoDB, Event-Driven Architectures, Microservices, Unix/Linux, JavaScript, RSpec, Serverless Architectures, Bootstrap, Linux Self-Hosting, AWS Lambda, Dockerized Applications, CI/CD Pipelines, TDD

University Projects and Recognitions

- **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.

Additional Information

LinkedIn: <http://linkedin.com/in/jonathan-javier-monsalve>

GitHub: <https://github.com/jjmonsalveg>