

JUAN CAMILO MELO LÓPEZ

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PROFESSIONAL PROFILE

Telematics Engineering student pursuing a career in Cloud/DevOps Engineering, with over a year of hands-on, project-based experience designing and automating end-to-end infrastructure: CI/CD pipelines, GitOps workflows, Infrastructure as Code, container orchestration, and observability across AWS and GCP. Backed by a broader foundation in networking, systems engineering, software development, and cybersecurity. Honor Roll student for all 8 semesters completed to date, including three Honor Scholarship awards for top academic performance, reflecting a pragmatic, adaptable, and responsible approach to solving real infrastructure problems.

EDUCATION

Universidad Icesi
B.Eng. in Telematics Engineering (GPA: 4.7/5.0)
8th Semester of 10 | Relevant coursework: Infrastructure I–III, Platforms I–II, Infrastructure Automation, Cloud Computing, Operating Systems, Software Engineering, Systems & Communications, IT Operations

Cali, Colombia
Feb. 2023 – Feb. 2028

Academic Recognition: Honor Scholarship (Beca de Honor) recipient for periods 2023-2, 2024-2, and 2025-2

WORK EXPERIENCE

Universidad Icesi
Networking Laboratory Assistant | Part-time

Cali, Colombia
Feb. 2026 – Present

- Maintained and monitored the internal network infrastructure of the university laboratory, ensuring optimal performance and proper utilization of specialized equipment.
- Provided hands-on technical support during laboratory sessions, assisting faculty and students with device configuration, connectivity troubleshooting, and hardware maintenance.
- Refined practical expertise in networking by actively diagnosing and resolving connectivity issues, and managing the configuration and specialized care of network devices.

Academic Teaching Assistant: Algorithms & Programming | Part-time · Hybrid

Feb. 2024 – Nov. 2024

- Supported 30+ students per semester in designing and implementing algorithmic solutions in Java, reinforcing object-oriented design principles, data structure selection, and Git/GitHub version-control workflows.
- Guided students from problem specifications through algorithm design to working implementations, strengthening their ability to translate technical requirements into structured, maintainable code.
- Appointed by faculty based on top academic standing (GPA 4.8/5.0) and demonstrated technical proficiency in data structures and object-oriented programming.

RESEARCH EXPERIENCE

Research Group Celsia
Satellite Networks Researcher

2024 – 2025

- Conducted research on the evolution and economic landscape of modern satellite network technologies, with a focus on Low Earth Orbit (LEO) constellations such as Starlink.

PROJECTS

Platform Pipeline: Self-Hosted CI/CD, GitOps & Observability Platform

Jul. 2026

Go · Jenkins (JCasC) · Terraform · Docker · kind · ArgoCD · Helm · SonarQube · Gitleaks · Trivy · Syft (SBOM) · Prometheus · Grafana · Alertmanager · Gitea
Personal Project · [Repo](#) ↗

- Built a complete, locally runnable DevOps platform around a two-service Go application, with Jenkins fully configured as code (plugins.txt, JCasC, Job DSL) to run build, unit tests, a SonarQube quality gate, Gitleaks secret scanning, image build, Syft SBOM generation, and a Trivy vulnerability gate before pushing to a local registry.
- Provisioned the entire environment with Terraform using local state: Docker network, local registry, kind cluster, namespaces, and the ArgoCD and kube-prometheus-stack Helm releases, requiring zero cloud accounts or credentials.
- Implemented GitOps continuous delivery with ArgoCD reconciling a Kustomize-based deploy folder from a local Gitea instance; Jenkins releases by committing an image-tag bump, and a post-deploy health gate automatically reverts the release commit if the new version never becomes healthy.
- Set up full observability with kube-prometheus-stack, including a provisioned Grafana dashboard, ServiceMonitors, and PrometheusRule alerts with optional Alertmanager-to-Slack notifications; validated the loop with scripted traffic, pod-failure, and failed-release demos.

E-Commerce Platform: Full Stack + AWS Infrastructure as Code

May 2026

Java 21 · Spring Boot · Spring Security · JWT · React 18 · Tailwind CSS · PostgreSQL · AWS CloudFormation · EC2 ASG · RDS · ALB · CloudFront · S3 · CloudWatch · SNS · CloudTrail · MercadoPago
Coursework Project: Infraestructura III · [Repo](#) ↗

- Architected and deployed a full-stack e-commerce platform: a Java 21 + Spring Boot REST API with JWT/BCrypt authentication and role-based access control, a React 18 + Tailwind SPA served from S3 via CloudFront, and PostgreSQL on RDS, all provisioned through 10 CloudFormation stacks.
- Configured auto-scaling EC2 fleet (ASG min 1 / max 3) behind an ALB with CPU target-tracking policy; provisioned separate CloudFront distributions for frontend, backend proxy, and media assets with S3 OAC.

- Integrated MercadoPago Checkout Bricks payment gateway with HTTPS webhook callbacks; set up CloudWatch alarms, SNS email notifications, and CloudTrail audit logging for full operational observability.
- Automated the full deployment lifecycle with Bash scripts: sequential CloudFormation stack deployment, backend JAR upload to S3, frontend build + sync, and pre-demo environment health verification.

IcesiScore: Serverless Real-Time Sports Platform

Apr. 2026

Python · AWS Lambda · API Gateway v2 (WebSocket) · Amazon Cognito · RDS PostgreSQL · DynamoDB · SNS · Terraform · Flutter · Clean Architecture + BLoC
 Coursework Project: Aplicaciones Móviles · [Repo ↗](#)

- Built serverless backend on AWS: Python Lambda functions, Cognito JWT authentication, API Gateway REST + WebSocket endpoints, RDS PostgreSQL for relational data, and DynamoDB for WebSocket connection registry.
- Designed event-driven live-score broadcast pipeline: POST event → Lambda → SNS topic → broadcaster Lambda → DynamoDB scan → WebSocket postToConnection; managed stale connections via GoneException cleanup.
- Developed Flutter mobile frontend with Clean Architecture (domain / data / UI layers), GetIt dependency injection, and BLoC state management; provisioned all AWS infrastructure with Terraform.

Kubernetes Cluster: Automated Provisioning with Ansible

Mar. 2026

Ansible · Kubernetes 1.32 (kubeadm) · Flannel CNI · containerd · BIND9 · dhcpd · Rocky Linux 9 · KVM/QEMU · GitHub Actions CI
 Coursework Project: Infraestructura III · [Repo ↗](#)

- Automated end-to-end provisioning of a production-grade Kubernetes cluster (control plane + worker) on KVM/QEMU using idempotent Ansible playbooks with BIND9 DNS and DHCP bastion; achieved 0 configuration drift on repeated runs.
- Configured Flannel VXLAN overlay network, firewallD rules, and kube-proxy iptables for cross-node pod communication; validated NodePort service exposure and CoreDNS internal service discovery.
- Implemented GitHub Actions CI pipeline for automated Ansible playbook linting and syntax validation on every commit.

CI/CD Pipeline with GitHub Actions: Automated Cloud Deployment

Apr. 2026

React · Vite · GitHub Actions · Terraform · AWS S3 · CloudFront
 Coursework Project: Infraestructura III · [Repo ↗](#)

- Designed and implemented a two-job CI/CD pipeline (test → deploy) with strict deployment gate: the deploy stage runs only on passing tests and pushes to main, enforcing quality control on every merge.
- Provisioned AWS infrastructure (S3 static hosting + CloudFront CDN) with Terraform; automated CloudFront cache invalidation post-deployment and managed AWS credentials securely via GitHub Actions secrets.

ISP-Grade GPON Network: Full Infrastructure Stack

Nov. 2025

MikroTik RouterOS · Cisco SG350X · Huawei OLT/ONT · Ubuntu Server 24.04 · BIND9 · Kea DHCP · Postfix · Dovecot · Caddy · Prometheus · Grafana · LibreNMS · LibreQoS
 Coursework Project: Infraestructura II & Plataformas I · [Repo ↗](#)

- Designed a multi-VLAN dual-stack (IPv4/IPv6) ISP network integrating physical hardware (MikroTik, Cisco, Huawei GPON) with a full virtualized service stack on Ubuntu Server: BIND9 DNS, Kea DHCP, Postfix/Dovecot email, Caddy reverse proxy with load balancing, and LibreQoS per-client bandwidth management.
- Deployed Prometheus + Grafana + LibreNMS unified observability stack; configured SNMP monitoring and real-time alerting dashboards across all physical and virtual infrastructure.

CERTIFICATIONS

Cisco DevNet Associate

Nov. 2025

Cisco: Network programmability, REST APIs, automation, CI/CD practices, Ansible, Python scripting

AWS Academy Cloud Foundations

May 2026

Amazon Web Services (AWS)

AWS Academy Cloud Operations

Jul. 2026

Amazon Web Services (AWS): Monitoring, automation, deployment operations

Google Cloud Computing Foundations Certificate

Apr. 2026

Google: Compute Engine, VPC networking, Cloud IAM, GKE fundamentals

Google Cloud Skill Badges (4)

2026

Build a Secure GCP Network · Set Up App Dev Environment · Implement Load Balancing · Prepare Data for ML APIs

Google Cybersecurity Certificate Series

2024 – 2025

Cybersecurity Foundations · Security Risk Management · Network Security · Linux & SQL

TECHNICAL SKILLS

Cloud Platforms: AWS (EC2, ASG, RDS, S3, CloudFront, CloudFormation, CloudWatch, SNS, Lambda, API Gateway, Cognito, DynamoDB, CloudTrail), GCP (Compute Engine, VPC, Load Balancing, Cloud Run)

DevOps & Automation: GitHub Actions, Ansible, Docker, Kubernetes, Terraform, CloudFormation (IaC), Bash scripting, CI/CD pipeline design, KVM/QEMU

Backend Development: Java, Spring Boot, Spring Security, JWT, REST APIs, Python, PostgreSQL, JPA/Hibernate

Frontend Development: React, Vite, Tailwind CSS, JavaScript / TypeScript, Flutter

Observability: Prometheus, Grafana, LibreNMS, AWS CloudWatch, SNMP monitoring

Networking: MikroTik RouterOS, Cisco IOS, VLANs, IPv4/IPv6 dual-stack, BIND9 DNS, Kea DHCP, GPON (OLT/ONT)

Languages: Spanish (Native) · English (B2)