Juan Sebastian Urrea Lopez

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SUMMARY

Software engineer and AI researcher with dual B.Sc. degrees (Magna Cum Laude, 4.69/5.0) and an ongoing M.Sc. from Universidad de los Andes. Author of 2 IEEE publications in computer vision and software simulation. Production experience architecting cloud-native systems for 100K+ users at YC-backed companies using AWS, Go, and Flutter. Founder of open-source tools serving 8K+ students. Research experience at Cornell University (SURF Fellow) and the Universidad de los Andes Biomedical Computer Vision Lab.

EDUCATION

Universidad de los Andes — Bogotá, Colombia

M.Sc. Systems & Computing Engineering	2026-01 – Present
B.Sc. Systems & Computing Engineering, Magna Cum Laude	2019-01 – 2025-06
B.Sc. Industrial Engineering, Magna Cum Laude	2019-01 – 2024-12
Minor Biomedical Engineering	2019-01 – 2025-06

EXPERIENCE

Truora Inc. (YC W19) — 2025-08 – null
Software Engineer — Bogotá, Colombia
- Architected serverless AWS integration (EventBridge, Lambda/Go, API Gateway) syncing HubSpot opportunity data with idempotent processing, Redis caching, and Secrets Manager — delivering $10K in AWS credits upon validation.
- Implemented webhook signature validation and secure API key rotation to guarantee end-to-end data integrity.

Caseware International — 2024-01 – 2025-08
Software Developer — Bogotá, Colombia
- Led zero-downtime migration from RDS to S3 Parquet for 100K+ users, owning a dual-layer validation system comparing legacy and new implementations to guarantee identical responses.
- Built Java GraphQL client and New Relic dashboards for anomaly detection; contributed accessibility improvements (focus traps, screen readers) and ag-grid data grid components.

Multiaservi Ltda. — 2024-12 – 2025-06
Application Developer — Bogotá, Colombia
- Built offline-first Flutter mobile app with automatic data/image sync and a Nest.js backend (Auth0, RBAC) for a tax-auditing platform serving low-connectivity rural areas of Colombia.
- Designed real-time location-tracking dashboards optimized for low-spec Android environments.

Cornell University — Dept. of Computer Science — 2023-06 – 2023-08
Research Engineer (SURF Fellow) — Ithaca, NY, USA
- 10-week fellowship under Prof. Owolabi Legunsen studying inline-test co-evolution across 30+ open-source Java projects; curated 200+ statement-level breaking changes.
- Built automated pipeline simulating project Git history — generating inline tests via ExLi, rolling forward through commits, and recording pass/fail results.

Kimberly-Clark Corporation — 2022-07 – 2023-01
Data Scientist — Bogotá, Colombia
- Applied NLP embeddings to deduplicate 30K client records in SQL Server; automated Power BI documentation with Python (100+ hours saved) and added version control for 32 reports.
- Implemented production monitoring pipeline for a churn-prediction model to track data drift and ensure reliability.

PUBLICATIONS

ANTARES: A Software-Based Tool for Simulating Naval Radar Operations — 2025
- J. S. Urrea-Lopez, C. Barreto-Reyes, M. Linares-Vásquez. **IEEE International Conference on Military Technologies (ICMT)**. [Paper] [Code] [Demo]

Real-Time Face Mask Detection with SSD — 2021
- E. S. Lozano Roa, J. S. Urrea López, I. D. Chacón Silva. **IEEE 2nd International Congress of Biomedical Engineering (CI-IB&BI)**. [Paper] [Code]

VOLUNTEERING

Ego4D — Meta AI Research | *Data Contributor* — 2021-06 – 2021-08
- Contributed egocentric video footage to Ego4D, the world's largest publicly available first-person video dataset, supporting research on embodied AI and egocentric perception.

HONORS & AWARDS

Saber Pro — 11th Best National Score | Ministry of Education of Colombia — 2024-12
- Ranked 11th nationally among 200K undergraduate test-takers across critical reading, quantitative reasoning, scientific reasoning, and English.

Full-Tuition Merit-Based Scholarship | Universidad de los Andes — 2018-01
- Competitive merit scholarship covering full tuition for a 6-year dual-degree program; maintained through graduation.

Hackathon & Competition Wins (6+) | Various — 2022-01
- 3x Codefest Ad Astra (2022, 2023, 2024); 1st Place Extreme Programming Competition 2022; Sabana Hack 2022; DataJam for Transparency 2022. Domains: full-stack, competitive programming, data science.

EA GameJam — Best Game Experience | Electronic Arts — 2026-01
- Best game experience award at the Electronic Arts Game Jam. NEXARI project.

CERTIFICATIONS

Building LLM Applications with Prompt Engineering | NVIDIA Deep Learning Institute — 2025-04

Building Transformer-Based NLP Applications | NVIDIA Deep Learning Institute — 2024-05

Fundamentals of Deep Learning | NVIDIA Deep Learning Institute — 2024-04

Data Science for All: Colombia 5.0 — Honors | Correlation One (3% acceptance rate) — 2021-09

Applied Data Science with Python Specialization (5 courses) | University of Michigan / Coursera — 2021-01

Deep Learning Specialization (5 courses) | DeepLearning.AI / Coursera — 2020-07