

Iván Andrés Robles Rodríguez

Electronic Engineering Student · Backend, Telecom, Automation & Security

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PROFESSIONAL SUMMARY

Final-year Electronic Engineering student focused on backend development, process automation and cybersecurity. Advanced Python experience in data analysis and computer vision, combined with solid Linux server administration and networking (CCNA certified). Proven leadership as Chair of the IEEE Robotics & Automation Society, leading multidisciplinary teams and innovation projects. Passionate about turning real-world problems into reliable, scalable software systems.

TECHNICAL SKILLS

Programming Languages	Python (Pandas, OpenCV, automation), JavaScript, C/C++, PHP, SQL, R
Backend & DevOps	REST APIs, Supabase, PostgreSQL, Git/GitHub, Linux (Ubuntu/Debian), Bash, Agile/Jira
Networking & Security	Cisco CCNA, LAN/WAN, NAT, vulnerability analysis, perimeter security, DHCP/DNS/HTTP, Packet Tracer
Telecommunications & RF	5G NR planning (3GPP TR 38.901), RF & antenna design, link budgeting, Longley-Rice/ITM, RadioMobile, Xirio, SDR (USRP), spectrum analysis
Data Analysis	Excel (Macros/VBA), Power BI, statistical modeling, MATLAB/Simulink

LEADERSHIP & EXPERIENCE

Chair (President) — IEEE Robotics & Automation Society Universidad del Magdalena	Feb 2025 – Dec 2025
- Led multidisciplinary teams on automation and control projects. - Organized technical workshops and coordinated chapter planning and partnerships.	
Webmaster — IEEE Student Branch Universidad del Magdalena	Feb 2025 – Dec 2025
- Administered and maintained WordPress platforms, ensuring high availability. - Integrated APIs and improved SEO for academic visibility.	
Academic Monitor — Electronics II Universidad del Magdalena	Feb 2025 – Dec 2025
- Mentored 70+ students in circuit analysis and lab work. - Built study guides and support material, translating complex topics into plain language.	
Co-founder & Vice-President — ELECTRUM Electronic Engineering Association	Jul 2024 – Present
Co-founded a student association serving 30+ active members, organizing academic events and collaborative digital tools.	

PROJECTS

Mach-T — Collaborative mobile platform (degree project, live). Designed and built the backend on Supabase: PostgreSQL data model, authentication and a secured document store with private buckets, signed URLs and access control. Live on iOS, Android and web. Supabase PostgreSQL
5G Coverage Planning. Radio-coverage study at 3.5 GHz in Xirio-Online using the 5GCM method (3GPP TR 38.901) and an Alpha-Beta-Gamma propagation model; link budget sized around an SS-RSRP threshold of -100 dBm. 5G NR Xirio
Point-to-Point Radio Link. Multi-hop microwave link in RadioMobile with Ubiquiti PowerBeam antennas over Sierra Nevada terrain — Longley-Rice/ITM propagation, Fresnel-zone clearance and full link-budget analysis. RadioMobile Link budget
License-Plate Detection. Real-time computer-vision system in Python & OpenCV for plate recognition with timestamped data logging. Python OpenCV
Linux Network Infrastructure. Configured DHCP, DNS and HTTP services on Ubuntu/Debian servers with basic security hardening. Linux
IoT Environmental Monitor. End-to-end hardware/software system for real-time atmospheric data acquisition and remote visualization. Arduino IoT

EDUCATION

B.S. Electronic Engineering
Universidad del Magdalena
10th semester · expected graduation September 2026

LANGUAGES

- Spanish — Native
- English — B2 (Professional Working Proficiency)

CERTIFICATIONS

- Certified Cybersecurity Apprentice — Palo Alto Networks
- Junior Cybersecurity Analyst — Cisco Networking Academy
- CCNA: Introduction to Networks — Cisco Networking Academy
- Statistician with R — DataCamp