

# JUAN PABLO ROJO

juan.pablo.rojo@mi.unc.edu.ar | juanpablorojo1@gmail.com | +54 385 514-3413

linkedin.com/in/juan-pablo-rojo-83b843243 | github.com/juanpablorojo1

Cordoba, Argentina — On-site in Cordoba or remote worldwide

---

## PROFESSIONAL PROFILE

Biomedical Engineer (UNC, 2026) specializing in artificial intelligence, computer vision, and medical image processing. Developed TraumaVision AI — a clinical decision support system for fracture detection using deep learning (AUC-ROC 0.973, Accuracy 97.2%), with performance comparable to expert radiologists (Lindsey et al., PNAS 2018); currently in startup phase, competing in funding competitions. Founder of Eleven Estudio Digital. End-to-end profile: machine learning, computer vision, full-stack web development, and clinical biomedical engineering.

---

## TECHNICAL SKILLS

**AI & Machine Learning:** PyTorch, Scikit-learn, NumPy, Pandas | deep learning, convolutional neural networks (CNN), transfer learning, fine-tuning | Claude API | medical image processing

**Computer Vision:** DenseNet, YOLOv8 (object detection, Ultralytics), Grad-CAM (Captum) | image classification, fracture detection, clinical radiological image analysis

**Web Development & APIs:** Next.js, React, FastAPI, SQLAlchemy, SQLite, Supabase | HTML/CSS/JS, GSAP, Vercel | REST API, AI model integration and deployment to production

**Data & Visualization:** Matplotlib, Pandas | interactive dashboards | automated PDF reports (ReportLab)

**Biomedical Engineering:** corrective and preventive maintenance of medical equipment | JCI, ISO/IEC, ANMAT standards | SaMD (Software as Medical Device) | healthcare regulatory compliance

**Tools & Marketing:** Python, Git/GitHub, Vercel, Supabase, Claude Code | Meta Ads, Google Ads, SEO | end-to-end project management

---

## FEATURED PROJECTS

### TraumaVision AI — Clinical Decision Support System 2025 - present

Senior Thesis + Startup (funding competitions) | National University of Cordoba

- Developed a web application that analyzes X-ray images with artificial intelligence to assist trauma surgeons in bone fracture detection, achieving performance comparable to expert radiologists (Lindsey et al., PNAS 2018).
- Trained and validated a deep learning classifier (YOLOv8): AUC-ROC 0.973 | Accuracy 97.18% | Sensitivity 90.85% | Specificity 98.64% | F1 92.36% — blind test on n=817 images (FracAtlas dataset).
- Built a full-stack web application: FastAPI, SQLAlchemy, SQLite, Google OAuth, automated PDF reports (ReportLab), and interactive analytics dashboard.
- Currently in startup phase: competing in national startup competitions for seed funding; architecture designed for SaMD (Software as Medical Device) certification pathway.
- Stack: Python | PyTorch | DenseNet | YOLOv8 | Grad-CAM (Captum) | FastAPI | HTML/CSS/JS

---

## AWARDS & RECOGNITION

### 1st Place — World's First Industrial Hackathon 2025

RTS Group | Team: Algarroba LID (5 members)

- Anonymous challenge centered on a remote energy plant: diagnose operational failures and propose a comprehensive, self-sufficient energy system under real time pressure.
- Designed a simple and robust architecture integrating data, processes, and control in a unified direction: immediate actions to stabilize operations combined with long-term redesign strategies to make the plant more efficient, safe, and sustainable.

- Integrated perspectives from design, renewable energy, sustainability, and engineering to build a system that organizes key information, anticipates operational problems, and supports better decision-making in the field.

---

## WORK EXPERIENCE

### Founder — Web Development & AI Agents 2026 – present

*Eleven Estudio Digital | Cordoba, Argentina | eleven-pagina.vercel.app*

- Founded and lead a digital studio delivering web development, AI agents, automation, and digital content for SMEs and entrepreneurs in Cordoba.
- Built client websites with Next.js, React, GSAP, and Vercel; integrated AI agents via Claude API for 24/7 automated customer service on WhatsApp and Instagram.
- Managed the full project lifecycle: discovery, strategy, design, development, delivery, and ongoing monthly maintenance.
- Ran Meta Ads and Google Ads campaigns and ongoing SEO strategies for clients in the services and retail sectors.

### Biomedical Engineering Internship Mar – Jul 2024

*Sanatorio Allende S.A. | Nueva Cordoba, Argentina*

- Performed corrective and preventive maintenance on medical equipment in operating rooms, pediatric and adult ICUs, general wards, and sterilization units.
- Coordinated with medical and technical staff to diagnose equipment failures and restore critical device availability.
- Ensured compliance with Joint Commission International (JCI) standards across all maintained equipment and hospital processes.

### Undergraduate Teaching Assistant — Human Physiology Aug 2023 – Jun 2024

*FCEfYN, National University of Cordoba | Cordoba, Argentina*

- Supported instruction of Human Physiology for Biomedical Engineering students.
- Translated complex physiological concepts into accessible language and led collaborative study groups.

### Equipment Technician Dec 2023 – Mar 2024 | Dec 2024 – Mar 2025

*Snow Summit LLC | Big Bear Lake, California, USA*

- Developed professional-level English fluency operating in a 100% English-speaking, high-demand customer environment.
- Managed the full equipment acquisition process and performed technical maintenance under operational pressure.

---

## EDUCATION

### Biomedical Engineering 2020 – 2026 (expected)

*National University of Cordoba — Faculty of Exact, Physical and Natural Sciences (FCEfYN)*

- GPA: 7.45/10 with no failures | 90% degree completion
- Thesis: TraumaVision AI: Clinical Decision Support System for Fracture Detection using Convolutional Neural Networks

---

## ADDITIONAL TRAINING

### Applied Data Science with Python Specialization Coursera

*University of Michigan*

- Data visualization, applied machine learning, network analysis, supervised learning. Libraries: NumPy, Pandas, Matplotlib, Scikit-learn.

---

## LANGUAGES

- English: B2 Level — EF International Language Campus, Eastbourne, United Kingdom + 2 seasons of professional work in California, USA
- Spanish: Native