

# Juan Carlos Ortega Quezada

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## EDUCATION

### Carnegie Mellon University

Master of Science in Artificial Intelligence and Innovation

Pittsburgh, PA

August 2025 – May 2027

- *Relevant Courses: Deep Learning, Advanced Natural Language Processing, Human Robot Interaction, ML in Production*

### UNIR

Master in Big Data and Visual Analytics

La Rioja, Spain

January 2024

### National Polytechnic School (EPN)

Bachelor of Engineering in Electronic and Automation Engineering

Quito, Ecuador

May 2021

- Academic Excellence Scholarship
- Graduated with the second highest GPA

## TECHNICAL SKILLS

- **Languages:** Python, SQL, C++, Java, JavaScript (React)
- **Machine Learning:** PyTorch, TensorFlow, Scikit-learn, Transformers (Hugging Face), RAG, LLMs
- **Backend & Cloud:** FastAPI, Docker, Kubernetes, Kafka, Azure (CosmosDB)
- **Tools:** Git, CI/CD, Pinecone, Wandb

## WORK EXPERIENCE

### Mentor IA | Software Startup

Quito, Ecuador

Founder & Lead AI Engineer

December 2023 – May 2025

- Architected and deployed a full-stack AI platform using FastAPI and React, containerized with Docker and hosted on Azure infrastructure.
- Engineered a multi-agent RAG pipeline utilizing Unstructured API for data ingestion and Pinecone for vector embeddings, integrating Gemini and OpenAI to deliver dynamic educational content
- Implemented a robust data strategy by managing hybrid storage with CosmosDB and MySQL, while designing a custom logging system to track agent performance and user engagement

### ALLIENT | Software Startup

Quito, Ecuador

AI and ML Developer Internship

September 2023 – December 2023

- Developed an automated candidate ranking system by integrating LLM-based scoring into an existing production platform, utilizing prompt engineering to extract qualitative matching rationale
- Architected a "Top-N" selection algorithm that streamlined recruitment workflows, significantly reducing manual screening time for high-volume roles
- Established rigorous pre-deployment testing protocols, ensuring high model reliability and seamless integration of new AI features into a live infrastructure

### Nipro Medical Corporation | Medical Equipment Manufacturing

Quito, Ecuador

Technical Coordinator

April 2022 – September 2023

- Managed the technical deployment and quality assurance of 250+ medical devices across national healthcare networks
- Optimized operational protocols and led technical training sessions for healthcare staff on equipment usage and maintenance

## HONORS AND SCHOLARSHIPS

### Fulbright Ecuador

Fulbright Scholarship Winner

- Selected for the Fulbright Program, awarded to individuals demonstrating exceptional academic and leadership potential

## SELECTED PROJECTS

### Design and Simulation of PID and Lyapunov-Based Controllers for Humanoid Robot Navigation

- Undergraduate thesis designing and simulating controllers for humanoid navigation, benchmarking PID vs. Lyapunov approaches on RRT-generated paths to evaluate stability, precision, and path-tracking efficiency

### Rehabilitation AI Partner (Research) | Advisor: Prof. Henny Admoni

- Architecting an RL-driven "Rehab Partner" by integrating Ecological Momentary Assessment (EMA) for real-time state monitoring and Just-in-Time Adaptive Interventions (JITAI) to deliver personalized behavioral feedback, optimizing user exercise consistency and long-term physical therapy adherence

### Movie Recommendation System (ML in Production)

- Architecting an end-to-end ML pipeline featuring real-time data ingestion via Kafka and containerized deployment with Docker
- Building a recommendation engine based on Matrix Factorization, integrating automated web-scraping modules for metadata enrichment and model performance tracking