Juan David Guevara Arévalo

Systems and Computing Engineering Student
Universidad de los Andes, Colombia
david@jguevara.dev | GitHub | LinkedIn

Professional Summary

Systems and Computing Engineering undergraduate with specialization in AI-driven robotics and software architecture. Vision Area Lead and Technical Lead for software systems in *SinfonIA Uniandes*, the university's social robotics team. Skilled in real-time perception pipelines, ROS architectures, and AI model integration. Strong algorithmic background with competition success and ongoing cryptographic research.

Education

B.Sc. in Systems and Computing Engineering
Universidad de los Andes, Colombia
Expected Graduation: April 2026 GPA: 4.03 / 5.00

Technical Skills

- **Languages:** Python, C++, Kotlin, Java, Rust
- **Frameworks/Tools:** ROS, Docker, Git, Linux, PyTorch, YOLO, Mediapipe, LangChain, LangGraph
- **Domains:** Computer Vision, Robotics, LLMs, Software Architecture, Reinforcement Learning
- **Languages:** Spanish (Native), English (Proficient)

Experience

SinfonIA Uniandes – Social Robotics Research Team
Vision Lead & Software Architecture/Technical Lead 2023–2025

- Designed and led software architecture, including containerization and modular deployment.
- Led the vision systems area; implemented real-time pipelines using ROS, YOLO, Mediapipe.
- Integrated AI models for autonomous behavior and task execution.
- Mentored new contributors in ROS and software development.
- Contributor to **RoboCup@Home 2024 1st Place** win.

Universidad de los Andes
Private Tutor & Robotics Software Contributor 2023-2025

- Provided tutoring in algorithms and software development.
- Assisted with public demonstrations using Pepper robots.
- Contributed to AI and control software for the G1 humanoid robot.

Projects & Achievements

- **Cryptography Research:** Co-authoring paper on applied cryptographic protocols.
- **Medical history taking:** Built an Agentic System targeting medical history taking to predict diseases and accelerate medical processes.
- **Diseases prediction:** Built, designed, and trained a Neural Network to predict diseases based on multiple symptoms. Used by an Agentic System.
- **Deep Reinforcement Learning:** Completing Hugging Face course on DRL.

Awards & Distinctions

- **RoboCup@Home 2024 – 1st Place**, Team SinfonIA Uniandes