

# Santiago Rodriguez Mora

Electronics Engineering & Computer & Systems Engineering  
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🐙 GitHub Profile

🌐 LinkedIn Profile

🔧 Google Cloud Skills

## PROFESSIONAL PROFILE

Bilingual student pursuing a double major in Electronic Engineering and Computer and Systems Engineering at Universidad de los Andes. I possess an exceptionally high learning curve and proficiency in various programming languages, algorithms, networking, software development, databases, IoT, robotics, and machine learning. Passionate about machine learning and AI applications, robotics, virtualization, XR technologies, and web development. I bring proven experience in team-based project development that spans software, robotics, and artificial intelligence domains. My focus has been on impactful projects with a social impact. Actively engaged in research-oriented projects, my broad interests cover various areas within technology, with a specific emphasis on advancing the fields of robotics and AI. Adept at leading interdisciplinary teams, my problem-solving skills and adaptability shine in dynamic project environments. My experience reflects a commitment to contributing to the advancement of knowledge in Electronic Engineering and Computer Systems. Eager to bring my passion for research and practical experience to enrich academic and professional endeavors.

## EDUCATION

- **Universidad de Los Andes** *Bogotá, Colombia*  
*Computer and Systems Engineering* Current
- **Universidad de Los Andes** *Bogotá, Colombia*  
*Electronics Engineering* Current
- **Colegio de La Salle, Bogotá** *Bogotá, Colombia*  
*High School Diploma* 2020

## WORK EXPERIENCE

- **Universidad de Los Andes**  
*Teaching Assistant for the course "Introduction to Electrical and Electronic Engineering"* August 2023 - December 2023
- **Universidad de Los Andes**  
*Teaching Assistant for the international summer school course "Robotics Learning"* June 2023
  - Supported course instructors in workshops, labs, and classes by guiding students, addressing concerns, and reviewing assignments. Facilitated coordination of equipment and led installation and maintenance of software tools, including linux, ROS, PyTorch, Nvidia CUDA, TensorFlow, inverse kinematics libraries, CNN, and MoveIt. Valuable contributions to a machine learning and robotics-focused course.
- **Universidad de Los Andes**  
*Teaching Assistant for the course "Introduction to Electrical and Electronic Engineering"* January 2023 - June 2023
- **Universidad de Los Andes**  
*Teaching Assistant for the course "Introduction to Electrical and Electronic Engineering"* August 2022 - December 2022
  - Support instructors in workshops, labs and classes: guide students, resolve doubts, review assignments, transcribe notes and coordinate materials. Support projects aligned with the Sustainable Development Goals (SDGs), assist students in problem definition, methodology and development of sustainable projects, contributing to real-world solutions.
- **Universidad de Los Andes**  
*Website Management Assistant (Electrical and Electronic Engineering Department)* January 2022 - June 2022
  - Oversaw management and updates of the department's website. Responsibilities encompassed content publication, HTML, CSS, and JavaScript development for content implementation, ensuring website functionality and maintenance, and enhancing accessibility and user usability.
- **Universidad de Los Andes**  
*Teaching Assistant for the course "Society 5.0"* January 2022 - June 2022

- Assisted course instructors in workshops, labs, and classes by guiding students, addressing inquiries, reviewing assignments, managing evaluations, transcribing notes, and coordinating materials. Collaborated with diverse professors across various fields, engaging in technologies encompassing IoT comprehensively. This included sensor utilization, database management, benchmarking, and information transmission. I actively supported student inquiries during labs, evaluated assignments, conducted weekly meetings, and provided comprehensive support to ensure effective course delivery.

## ACADEMIC ACHIEVEMENTS AND PROJECTS

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### –Member and Sub-Leader of the SinfonIA Research Group

Current

*SinfonIA is an initiative to support the application and development of artificial intelligence and robotics.*

- \* SinfonIA is a research group dedicated to advancing social robotics, focuses on applications such as human-robot interaction, autonomous navigation, object recognition through artificial vision, and manipulation within the environment. Our ultimate goal is to achieve the complete autonomy of robots while continually enhancing and implementing cutting-edge technologies in AI and robotics. These skills are honed and tested on a semi-humanoid robotic platform. Notably, SinfonIA actively engages in the annual international RoboCup competition, securing the second-place position for two consecutive years.
- \* Specifically leads the Manipulation Subgroup within the research group, playing a pivotal role as one of the key figures in the overall team. His primary focus lies in analyzing the motion and interaction of the robot with the environment, resulting in the development of code and algorithms. Additionally, he concurrently contributes to the advancement of the robot's state machines, ensuring the seamless integration of all tools and functionalities.
- \* Currently spearheading a groundbreaking project focused on the virtualization of a Pepper robot through VR and AR tools. The ultimate goal of this project is to optimize, through virtual tools, the testing and development of functionalities for the robot across various environments.
- \* As the lead developer, I spearheaded the comprehensive creation of the group's official website, starting from scratch. My role encompassed the entire development, ongoing maintenance, and the implementation of various tools to enhance the group's outreach. I utilized cutting-edge web technologies to ensure an effective and dynamic online presence, optimizing accessibility and user experience. This commitment involved not only the technical construction of the site but also the strategic integration of tools that improved the group's visibility and reach across diverse digital platforms.

### –Member of Oasis

Current

*Oasis is an initiative dedicated to supporting the development of XR applications within innovative projects.*

- \* Oasis is a nascent initiative focused on the dissemination and learning of XR technologies, seeking innovative applications across various fields to promote product development and research. As an active member, I am part of a team developing a training application for emergency responders on the use of fire extinguishers in diverse scenarios.
- \* Additionally, as Oasis is still in its early stages, I am also actively involved in the development of its website, collaborating with a small team of developers to enhance our online presence and functionality.

## CERTIFICATIONS

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### – Google Cloud Certifications

*Skills acquired*

2023

- \* Getting Started - Create and Manage Cloud Resource
- \* Perform Foundational Infrastructure Tasks in Google Cloud

## TECHNICAL SKILLS AND INTERESTS

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**Languages:** Native Spanish - English B2 - French A1

**Programming languages:** Python, Java, C/C++, JavaScript & Typescript, HTML & CSS (including SCSS), Assembly, MATLAB

**Operative Systems:** Windows, Linux

**Development tools:** Arduino, Postman, Bootstrap, Visual Studio Code, Git, Github, OpenAI tools

**Frameworks:** ROS, Angular, Spring, Drupal, React, Django

**Machine Learning Frameworks::** PyTorch, CUDA, TensorFlow

**Web Technologies:** Node.js

**Cloud/Databases:** Google Cloud, SQL, MongoDB

**Office software:** Advanced Excel, Word, PowerPoint, LaTeX

**Soft Skills:** Teamwork, Flexibility, Empathy, Effective problem management, Leadership

**Areas of interest:** Robotics, artificial intelligence and machine learning, software development, web development, AR and VR

**EXTRA-CURRICULAR ACTIVITIES**

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\* **Volunteer Math Teacher at Universidad de los Andes**

*Delivered math lessons to 5th grade students*

*current*

**REFERENCES AVAILABLE UPON REQUEST**

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