

Santiago Rodriguez Mora

Computer Science & Electronic Engineering Student
Universidad de Los Andes, Bogotá
Bogotá, Colombia

+57-3212860273

✉ rodriguezmorasantiago@gmail.com

✉ s.rodriguez2@uniandes.edu.co

🐙 GitHub

🌐 LinkedIn

🌐 Website

PROFESSIONAL PROFILE

Bilingual Software Developer and Computer Science Student at the Universidad de los Andes with a robust foundation in electronics, robotics, and artificial intelligence. Currently contributing to Straico as a Full-Stack Developer, integrating advanced technologies such as machine learning, large language models (LLMs), retrieval-augmented generation (RAGs), and natural language processing (NLP). Having experience designing and implementing software solutions that bridge theoretical concepts with practical applications. Proven ability in full-stack web development, API design, and microservice deployment. Strong collaborator with experience in leading interdisciplinary teams, fostering inclusive environments, and driving innovative projects with tangible societal impact. Passionate about continuous learning, research, and the development of transformative technologies.

EDUCATION

- | | |
|---|---|
| • Universidad de Los Andes
<i>Bachelor's Degree in Ingeniería Electrónica</i> | <i>Bogotá, Colombia</i>
Expected 2025 |
| • Universidad de Los Andes
<i>Bachelor's Degree in Computer Science</i> | <i>Bogotá, Colombia</i>
Expected 2025 |
| • Tecnológico de Monterrey
<i>Concentration in Data Analytics and Artificial Intelligence</i> | <i>Monterrey, Mexico</i>
Jul 2024 - Dec 2024 |
| • Colegio de La Salle, Bogotá
<i>High School Diploma</i> | <i>Bogotá, Colombia</i>
2020 |

WORK EXPERIENCE

- | | |
|---|---|
| • Straico
<i>Software Developer</i> | <i>Remote, Cheyenne, Wyoming, United States</i>
May 2024 - Present |
| <ul style="list-style-type: none">– Contributing to both front-end and back-end development, focusing on integrating artificial intelligence into various applications.– Designed and implemented APIs to facilitate seamless communication between AI models and web applications.– Built user-friendly interfaces using React, ensuring an intuitive user experience.– Developed robust server-side logic to support AI functionalities and data processing.– Implemented large language models (LLMs), natural language processing (NLP), retrieval-augmented generation (RAG), and embeddings to enhance application capabilities.– Deployed microservices architectures to improve scalability and maintainability. | |
| • SinfonIA Uniandes
<i>Manipulation Research Head</i> | <i>Bogotá, Colombia</i>
Apr 2023 - Present |
| <ul style="list-style-type: none">– Leading a team of engineering students to enable Pepper robots to interact effectively with their surroundings using ROS and MoveIt.– Focusing on collective problem-solving and developing cutting-edge solutions that enhance robotic functionality and performance in dynamic environments.– Spearheading a project on the virtualization of Pepper robots through VR and AR tools to optimize testing and development across various environments.– Developed and maintained the group's official website using Angular, enhancing outreach and visibility. | |
| • Oasis
<i>XR Application Developer</i> | <i>Bogotá, Colombia</i>
Feb 2024 - Jun 2024 |
| <ul style="list-style-type: none">– Developed training applications for emergency responders using Unity and C.– Collaborated with a team to disseminate and learn XR technologies, promoting product development and research.– Contributed to the development and maintenance of the Oasis website, enhancing online presence and functionality. | |
| • Universidad de Los Andes
<i>Teaching Assistant</i> | <i>Bogotá, Colombia</i>
Aug 2022 - Dec 2023 |

- Supported instructors in workshops, labs, and classes for the "Introduction to Electrical and Electronic Engineering" course.
- Guided students, resolved doubts, reviewed assignments, transcribed notes, and coordinated materials.
- Assisted in projects aligned with the Sustainable Development Goals (SDGs), aiding in problem definition, methodology, and development of sustainable projects.

•Universidad de Los Andes

Bogotá, Colombia

Teaching Assistant for Robotics Learning Course

Jun 2023 - Jun 2023

- Supported course instructors in workshops, labs, and classes, focusing on machine learning and robotics.
- Facilitated coordination of equipment and led installation and maintenance of software tools including Ubuntu, ROS, PyTorch, Nvidia CUDA, TensorFlow, inverse kinematics libraries, CNN, and MoveIt.

•Universidad de Los Andes

Bogotá, Colombia

Teaching Assistant for Society 5.0 Course

Jan 2022 - Jun 2022

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

•Universidad de Los Andes

Bogotá, Colombia

Frontend Developer

Jan 2022 - Jun 2022

- Oversaw management and updates of the department's website.
- Responsibilities included content publication, HTML, CSS, and JavaScript development to ensure website functionality and maintenance.
- Enhanced website accessibility and user usability through continuous improvements.

ACADEMIC ACHIEVEMENTS AND FEATURED PROJECTS

•AI-Driven Image Generation and Editing Platform

An advanced application leveraging OpenAI's Function Calling and Ideogram API to enable intelligent image generation, specialized editing, and image-to-image transformations.

- Implemented context-aware processing and automated mask generation for scalable and efficient AI-driven image workflows.
- Integrated seamless functionalities to enhance user experience and application performance.

•Smart Templates Application

This application detects similarities in user queries and suggests structured templates for related queries using OpenAI API with embeddings.

- Developed a system to analyze and generate templates based on user query similarities.
- Utilized graph visualization to represent relationships between similar queries effectively.

•SinfonIA Website

Featured Project

Developed SinfonIA's official website using Angular, showcasing the group's projects, team details, and news.

- Created a dynamic platform that supported the RoboCup 2024 competition by providing visibility for ongoing research.
- Facilitated connections for those seeking to engage with the research group through an optimized online presence.

•Pepper Robot Implementation in Unity for Virtual Reality Experiences

Featured Project

Developed a virtual simulation of the Pepper robot within Unity by integrating the Robot Operating System (ROS).

- Implemented advanced Virtual Reality (VR) and Augmented Reality (AR) technologies to create a digital twin of the Pepper robot.
- Enabled innovative applications in VR and AR by subscribing to robot topics through ROS, enhancing immersive technology integration.

CERTIFICATIONS

•Fundamentals of Deep Learning	
NVIDIA	Feb 2024
•Create and Manage Cloud Resources	Credential ID: 3432759
Google Cloud Skills Boost	Apr 2023
•Cloud Computing Fundamentals	Credential ID: 3417147
Google Cloud Skills Boost	Apr 2023
•Data, ML, and AI in Google Cloud	Credential ID: 3432343
Google Cloud Skills Boost	Apr 2023
•Infrastructure in Google Cloud	Credential ID: 3427403
Google Cloud Skills Boost	Apr 2023
•Networking in Google Cloud	Credential ID: 3427572
Google Cloud Skills Boost	Apr 2023
•Google Cloud Essentials	Credential ID: 3432399
Google Cloud Skills Boost	Apr 2023
•Perform Foundational Infrastructure Tasks in Google Cloud	Credential ID: 3432914
Google Cloud Skills Boost	Apr 2023

HONORS & AWARDS

•Participant in RoboCup 2024 Competition - Eindhoven	Certificated
RoboCup Federation	Jul 2024
– Represented Universidad de Los Andes in the RoboCup 2024 Competition held in Eindhoven, showcasing skills in robotics and teamwork.	
•First Place in RoboCup @Home - Social Standard Platform League	Certificated
RoboCup @Home	Jul 2024
– Led the SinfonIA team to secure first place in the RoboCup @Home - Social Standard Platform League, demonstrating excellence in robotic social interaction capabilities.	
– Collaborated with team members to innovate and enhance the performance and functionality of Pepper robots, reflecting a strong collective effort and dedication.	

TECHNICAL SKILLS AND INTERESTS

Languages: Native Spanish, English (B2), French (A1)
Programming Languages: Python, Java, C/C++, JavaScript & TypeScript, HTML & CSS (including SCSS), Assembly, MATLAB, C#
Operating Systems: Windows, Linux
Development Tools: Arduino, Postman, Bootstrap, Visual Studio Code, Git, GitHub, OpenAI tools, Unity
Frameworks: ROS, Angular, Spring, Drupal, React, Django, Node.js
Machine Learning Frameworks: PyTorch, CUDA, TensorFlow
Cloud/Databases: Google Cloud, SQL, MongoDB
Office Software: Advanced Excel, Word, PowerPoint, LaTeX
Soft Skills: Teamwork, Flexibility, Empathy, Effective Problem Management, Leadership, Adaptability, Creativity, Quick Learning
Areas of Interest: Robotics, Artificial Intelligence and Machine Learning, Software Development, Web Development, AR and VR

EXTRA-CURRICULAR ACTIVITIES

•Fundación Con las Manos	
Mathematics Teacher	Feb 2024 - Jul 2024
– Delivered math lessons to 5th-grade students, fostering foundational mathematical skills and encouraging academic growth.	

REFERENCES

Available upon request.