# Mariana Rodriguez Serrano

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#### Education

## Universidad de los Andes (Uniandes), Colombia

January 2015 - March 2021 (Intended)

- · B.Sc. Systems and Computing Engineering
- · B.Sc. Mathematics
- · Minor in Biomedical Engineering

## Engineering Leadership Program, Universidad de los Andes

January 2019 - Present

GPA: 4.50 / 5.00

· Based on MIT's Gordon Engineering Leadership Program.

#### Relevant Courses

- $\cdot$  Design and Analysis of Algorithms, Data Structures, Software Architecture.
- · Database Systems, Machine Learning Techniques, Mobile App Development.

### Work Experience

## Undergraduate Research Assistant, Universidad de los Andes

August 2019 - Present

· Developing a deep learning network to perform lung segmentation in CT scans of patients with SDRA.

### Summer Intern, Seguros Bolívar

June - August 2019

· Developed a short research project on the correlation of the risk of the different insurance products with the help of a mentor.

## Undergraduate Research Fellow, Purdue University

May - August 2018

- · Participated in an extensive joint research program along with Purdue University Summer Undergraduate Research Fellowship (SURF) and the Network for Computational Nanotechnology (NCN).
- · Conducted research under a faculty member on machine learning for the continuous representation of discrete chemical data.
- · Final deliverables included presenting research at a poster symposium, delivering an oral presentation, writing a technical paper and publishing a simulation tool on nanoHUB.

#### Undergraduate Teaching Assistant, Universidad de los Andes

February 2016 - July 2019

- · Tutored and graded the exams, projects and workshops of over 200 undergraduates and a few graduate students in diverse Computer Science and Mathematics courses.
- · Courses and technologies: Algorithmic and Object Oriented Programming I and II (Honors), Computational Infrastructure (Java), Security and Privacy of IIoT and IoT Systems (BLE, Wireshark), Database Systems (Java, SQL), Design and Analysis of Algorithms (Java, Python), Communications Infrastructure. Linear Algebra, Mathematical Thinking, Probability.

#### Teaching Assistant, Stanford Honors Academies

January 2018

· Taught an introduction to problem solving techniques to 40 Colombian high school students from diverse backgrounds throughout an intense 2-week course. Assisted during exercise sessions and assessed students' performance.

#### Awards and Recognitions

## ACM - ICPC Programming Contests, Universidad de los Andes

March 2019 - Present

- · Placed 26th out of 118 Colombian teams participating in Colombia's 2019 National Contest, with team "SCALAndo".
- · Placed 33rd in 2019 Latin America North Regionals contest.

## Systems and Computing Engineering Student Council

February 2019 - Present

- · One of 15 select students involved in the department's ongoing curricular reform.
- · Worked with the student representatives in order to promote activities that strenghten personal relationships and the sense of community inside the faculty and the university.

## SAKURA Exchange Program in Science, Tsukuba University

 $December\ 2018$ 

Excellence Award, Universidad de Los Andes

November 2016

## Skills and Technologies

Languages (Proficiency)

Extracurriculars

## MAUA Uniandes, university's student environmental committee

January 2019 - present

· Participated in the development of several projects in the areas of: animal protection, germination and posterior planting of trees in different areas of the city, low cost biodigesters for local farms and promotion of a plastic free campus.

## Universidad de Los Andes's chess team member

August 2016 - May 2017

· Participated in various local tournaments in representation of the university.

## **National Mathematics Olympiads**

January 2009 - September 2013

· Participated in regional and national competitions anually. Placed 3rd out of 50 contestants in the Final Round of 2012.