

# Francisco Alfonso Mayorga Cetina



## Mathematician - Software Developer

Professional in mathematics with ease and disposition for learning. I have more than two years of experience using object oriented programming (.NET) and data analysis (Python, R) tools.

I am interested in software development, scientific research and mathematical teaching, as well as digital design and illustration.

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🌐 francisco-mayorga-cetina

## Education

### Mathematics

Sergio Arboleda University, January 2014 - May 2020

**Thesis:** Characterizing Dual Graphs Associated to Triangulations of the Caracol Flow Polytope

**Learn Python & Ethical hacking from scratch**, Udemy, February 2020

**Python Cetification Course**, Programming Hub, August 2020

**Python 3 Cetification Course**, Programming Hub, August 2020

**Python Advanced Cetification Course**, Programming Hub, August 2020

**UI/UX Certification Course**, Programming Hub, November 2021

## Experience

### Development Analyst

Finac S.A.S., November 2020 - Currently

Analysis, estimation, design and implementation of software development solutions for company applications

### Team coordinator at "Monitores Sergistas"

Sergio Arboleda University, June 2018 - January 2020

Selection process for new candidates, evaluation and six-monthly statistical analysis of team's performance. Management of administrative and logistical processes, etc.

### Volunteer

HAIKO foundation, February 2019 - November 2020

Teaching support in Discrete Mathematics and Computational Thinking courses

## Publications

### A unifying framework for the v-Tamari lattice and principal order ideals in Young's lattice

Combinatorica Magazine (in review process), Springer editorial, February 2021

### On framed triangulations of flow polytopes, the v-Tamari lattice and Young's lattice

Proceedings of the 33rd International Conference on "Formal Power Series and Algebraic Combinatorics", Séminaire Lotharingien de Combinatoire - FPSAC 2021, Bar Ilan University, Ramat Gan, Israel. April 2021

## References

**Marta Yaneth Corzo Gómez**  
Mathematics school dean  
Sergio Arboleda University

**Rafael S. Gonzalez D'León**  
Researcher teacher  
Pontifical Xaverian University

**Leidy Alicia Tinjacá Romero**  
Lawyer  
Sergio Arboleda University

## Activities and events

### XX Congreso Colombiano de Matemáticas

Attendee, National University of Colombia, Manizales, July 2015

### Maratón nacional de programación ICPC

Contestant, Politécnico Grancolombiano; 2015, 2016, 2017, 2018 y 2019

### Cube Challenge Sergista

Organizer, Sergio Arboleda University, 2018 y 2019

### XXII Congreso Colombiano de Matemáticas

Speaker, University of Cauca, Popayán, June 2019

**Poster:** Flow polytopes and triangulations of the Caracol polytope

### Maratón Regional de Programación (South America North) ICPC

Contestant, Politécnico Grancolombiano, November 2019

## Tools and abilities

Adobe suite	<div><div></div></div>
C#	<div><div></div></div>
F#	<div><div></div></div>
Godot	<div><div></div></div>
English [B2]	<div><div></div></div>
IPE	<div><div></div></div>
Java	<div><div></div></div>
LaTeX	<div><div></div></div>
Moodle	<div><div></div></div>
OBS Studio	<div><div></div></div>
Python	<div><div></div></div>
R	<div><div></div></div>
Sagemath	<div><div></div></div>
SQL	<div><div></div></div>