

Carlos Martínez Quintero

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Summary

CS undergrad at Charles University (GPA 1.04 \approx 3.9 US). Mexican math-olympian (gold at nationals, top-8 in IMO TSTs) still passionate about mathematics; now deep into functional programming, proof assistants, & formal methods; teaches at international math camps.

Education

Programming experience.....

Proficient: Haskell, Python, \LaTeX , C#

Intermediate: C/C++, Lean

Basic: Prolog

Charles University, BSc Computer Science (math-heavy track) GPA: 1.04 / 4 (best = 1)

October 2023 - June 2026 (expected)

Currently taking: Probability and Statistics 2, Functional Programming, Algebraic Topology 1, Algebraic Invariants in Knot Theory

Relevant Courses: Set Theory, Probability and Statistics 1, Formal Mathematics and Proof Assistants, Non-Procedural Programming, Algebra 1 & 2, Propositional and Predicate Logic, Combinatorics and Graph Theory 1, Automata and Grammars, Algorithms and Data Structures 1 & 2, Computer Systems, Programming 1 & 2, Programming in C++, Linear Algebra 1 & 2, Mathematical Analysis 1 & 2

Languages spoken.....

Spanish (native), English (fluent – studied at school for at least 9 years)

Test scores.....

GRE: Verbal: 165; Quant: 166. Taken on April 30, 2022.

SAT: Total: 1570; Math: 800; EVBRW: 770. Taken on December 3, 2022.

Work and selected internships

Qualia Research Institute: Independent contractor; June 2023 to August 2023.

Mercor: Math expert; October 2024 to present.

Teaching

Tutor at Maths Beyond Limits 2024: *September 2024*

Gave a three-day set of lectures on automata theory and formal grammars.

Tutor at MBL Balkans 2025: *April 2025*

Gave a three-day set of lectures on propositional and predicate logic.

Tutor at Maths Beyond Limits 2025: *September 2025*

Gave a three-day set of lectures on theorem proving in Lean, jointly with Ruth Plümer.

Projects (available on GitHub)

Conway's Game of Life simulator using Tkinter:

January 2024

Written in Python as a semester project for the Programming 1 class at Charles University. Allows for simulation in 'infinite' grids.

Arbitrary-Precision Symbolic Calculator:

June 2024

Written in C# as a semester project for the Programming 2 class at Charles University. Allows for computations with rationals, certain elements of finite fields as well as matrices.

Parser and Interpreter for a Small Haskell-like Functional Language:

June 2025

Written in Haskell as a semester project for the Non-Procedural Programming class; will extend to an exploration of tactic-based programming as an Individual Software Project for university.

Selected fellowships and awards

Atlas Fellowship: Was selected as Atlas fellow. Received scholarship and attended summer program. Awarded May 2022.

Mexican Mathematical Olympiad (OMM) 2021: Gold medal, awarded November 2021.

Mexican Mathematical Olympiad (OMM) 2022: Gold medal, awarded November 2022.

Mexico IMO TSTs: 2022 and 2023, 8th place (best result; top 6 make IMO team)

[Camps attended](#).....

Winter Applied Rationality Program (WARP) 2022:

March 2022

Atlas Fellowship Summer Program:

June 2022

European Summer Program on Rationality (ESPR) 2022:

August 2022

Maths Beyond Limits (MBL) 2022:

September 2022

Gave a talk on Toki Pona.

Maths Beyond Limits (MBL) Balkans 2023:

March 2023

Gave a talk on Conway's Game of Life.

Maths Beyond Limits (MBL) 2023:

September 2023

Gave a talk on meditation.

Farum Mathcamp 2024:

February 2024

Gave a talk on the mathematics of the game of Hex.