## **Education**

#### **Charles University**

October 2023 – June 2026 (expected)

Computer science undergraduate student in Prague, Czechia.

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

Camps attended.....

## Winter Applied Rationality Program (WARP) 2022:

March 2022

Camp in Oxford, UK for analytically-minded students with sessions in topics related to information theory, cryptography, psychology and game theory.

## **Atlas Fellowship Summer Program:**

Summer program in Berkeley, CA, attended by Atlas Fellows on topics such as AI, epistemology, and personal growth.

## European Summer Program on Rationality (ESPR) 2022:

Camp in Oxford, UK for mathematically talented students with sessions in topics related to information theory, cryptography, communication skills, game theory and Al.

## Maths Beyond Limits (MBL) 2022:

September 2022

Mathematical program in Rycerka Dolna, Poland for gifted high school students. Attended classes on topics such as: Category theory, discrete-time random processes, formal languages and automata, lambda calculus. Also gave a talk on the constructed language Toki Pona.

#### Maths Beyond Limits (MBL) Balkans 2023:

March 2023

Mathematical program in Konjic, Bosnia and Herzegovina for gifted high school students. Attended classes on topics such as: Haskell, expected values, the limits of computation, model theory, and machine learning. Also gave a camper talk on Conway's Game of Life.

## Maths Beyond Limits (MBL) 2023:

September 2023

Mathematical program in Rycerka Dolna, Poland for gifted high school students. Attended classes on topics such as: Category theory, algebraic topology, ordinals and transfinite recursion, projective geometry. Also gave a talk on meditation.

Programming experience.

Haskell, Lean, C#, Python, C/C++, LATEX, and a bit of Prolog

Languages spoken.....

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

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

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

# **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)

# Work and selected internships

**Qualia Research Institute**: Worked as an independent contractor for QRI for 10 weeks, from June 2023 to August 2023.

Mercor: Math expert since October 2024, to this day.

# **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.

# Projects (available at 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