# Manuel Paez

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## Education

Columbia University - New York, NY — Sept. 2019 - May 2023

Bachelor of Arts in Computer Science; Student Organizations: Columbia Math Club, Quantum Computing Club
Courses: Intro to Quantum Computing, Advanced Algorithms, Theoretical Neuroscience, Natural Artificial Neural Networks

Phillips Exeter Academy - Exeter, NH — Sept. 2017 - Jun. 2019

High School Diploma; Student Organizations: Math Club, Physics Club, Computer Science Club, Puzzle Club
Courses: Advanced Physics, Quantum Mechanics, Advanced German I, History Research Project

## Research Experience

Research Intern - Flatiron Institute, Chklovskii Group — Sept. 2022 - Present

PI: Mitya Chklovskii; researching on improving the machine-learning based neuron-boundary detection algorithm for the neural-segmentation algorithm for connectomes of a Wasp's Brain

Research Assistant - Dept. of Physics, Columbia, Marka Labs — Oct. 2022 - May 2023

PI: Szabolcs Márka; researching Quantum Pattern Recognition Algorithm for Blackhole Collision Search

Research Assistant - Dept. of Psychiatry, Columbia, Iigaya Labs — Apr. 2022 - Sept. 2022

PI: Kiyohito Iigaya; investigating the neural representations and geometry of context-dependent tasks in the brain and replicating them with neural networks and other machine learning models

## Extracurricular Activities

Member - Undergraduate Math Society (UMS) — Sept. 2019 - Present

Co-head - Columbia Undergraduate Quantum Computing Club (CUQCC) — Dec. 2022 - Present

## Community Involvement

Scientific Mentorship Institute (Sci-Mi) — May 2022 - Aug. 2022

Tutor and mentor for underprivileged high school students in the areas of computer science and neuroscience

## Awards

Simon Foundation Global Brain SURF Fellowship — Sept. 2022
MIT IQuHACK 2023; Covalent x IBM Challenge - 1st place — Jan. 2023
United States International Young Physicist Tournament (USIYPT) - 1st place — Feb. 2018 and Jan. 2019

## Skills

Computer Languages: Python, Java, C, C++, R, MATLAB
Research Interests: High-dimensional Computational Geometry, Discrete Mathematics
Natural Languages: English (Fluent), German (Fluent), Spanish (Fluent), Korean (intermediate), French (intermediate)