Manuel Paez

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Education

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

Bachelor of Arts, Computer Science; 3.52 GPA Major; 3.41 GPA Cumulative

Courses: Intro to Quantum Computing, Advanced Algorithms, Intro to Computational Complexity, Accelerated Physics I and II, Theoretical Neuroscience, Natural Artificial Neural Networks, Honors Math A, Modern Analysis I

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

High School Diploma; 3.54 GPA; Student Organizations: Robotics Club, Math Club, Physics Club, Puzzle Club
Courses: Advanced Physics, Quantum Mechanics, Advanced German I, History Research Project

Research Experience

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

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

PI: Mitya Chklovskii; researching on improving the neuron-boundary detection algorithm for the larger neural-segmentation algorithm for 3D mapping (connectomes) of a Wasp's Brain

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

PI: Szabolcs Márka; researching Quantum Algorithmic and Convolution implementations for Blackhole Collisions Search

Extracurricular Activities

Member - Undergraduate Math Society (UMS) — Sept. 2019 - Present
Member - Theoretical Quantum Computer Science Reading Group — Oct. 2022 - 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

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

Skills and Interests

Computer Languages: Python, Java, C, C++, R, MATLAB
Other Computer Skills: Qiskit, Quantum Tensorflow, Cirq, Keras, and TensorFlow
Natural Languages: English (Fluent), German (Fluent), Spanish (Fluent), Korean (intermediate), French (intermediate)
Research Interests: Quantum Algorithms, Quantum Complexity, and Quantum Cryptography