Abdulah Amer || Brooklyn, NY, 11221

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A self motivated Physicist working in Quantum Computation, experienced with Python and Qiskit.

Education

The City College of New York **September 2015–May 2020**

- Bachelor of Science in Physics

Projects

Qiskit Seminar

- Gave guest lecture to Quantum Computation class on how to install Python, Qiskit and Jupyter Notebook.
- Taught students how to create their first quantum circuits in Qiskit.
- Showed students how to implement quantum teleportation protocol.

Quantum Phase Estimation

- Created Python script implementing Qiskit to run the Quantum Phase Estimation algorithm on an arbitrary quantum circuit. Utilized numerical visualization to obtain errors in measurement for different phases.
- Wrote a paper outlining how the algorithm works, as well as its implementation in Shor's algorithm.

Experience

Instructor, Tutoring Center at The City College of New York (New York, NY) **February 2020–Present**

- Taught undergraduates essential and advanced STEM courses, including physics at all levels, linear algebra, all core calculus courses, differential equations, and mathematical methods.

Instructor, New York Math Academy (Harlem, NY) **January 2020–April 2020**

- Taught middle school and high school students in math and science classes.
- Prepared students for SAT, ACT and AP exams.
- Served as a mentor to students, assisting them in understanding the college application process.

Lecturer, City College of New York (New York, NY) **September 2019-December 2019**

- Gave outreach demonstrations to local high school students expressing the importance of physics through a series of lab demonstrations. Engaged students by asking questions and giving them opportunities to participate.

Selected Coursework

Relevant Courses: Quantum Computation and Information, Quantum Mechanics, Solid State Physics, Thermodynamics and Statistical Mechanics, Electrodynamics, and Mathematical Methods.

Technical Skills

Programming: Python, Qiskit, NumPy, Matplotlib, Pandas, VPython, Jupyter Notebook, Atom, and LaTeX.

- IBM Qiskit package used to simulate quantum circuits and quantum computing algorithms such as the Quantum Fourier Transform and Grover's search algorithm.