# Pasquale Giusto

(917) 510-6402 | pg346@cornell.edu | Brooklyn, NY 11222

## EDUCATION

**Cornell University, College of Engineering**                                                                  **Ithaca, NY**
*Bachelor of Science in Applied and Engineering Physics*                                          *Expected May 2024*
*Minor in Mathematics*

## PROFESSIONAL EXPERIENCE

**Cornell University Department of Applied and Engineering Physics, Ithaca, NY**        *February 2024-Present*
*Grader*
- Grade homework assignments for AEP3550: Intermediate Electromagnetism, and provide feedback to students.

**Cornell Diversity Programs in Engineering, Ithaca, NY**
*Differential Equations Tutor*                                                                          *July 2023-August 2023*
- Independently taught biweekly 90-minute review sessions for Cornell students in the Engineering Summer Math Institute (ESMI) program.
- Constructed lesson plans and explained practice problems related to differential equations.
- Offered additional weekly hour-long private tutoring sessions to students who requested extra help.

**Cornell Diversity Programs in Engineering, Ithaca, NY**
*Office Assistant*                                                                                      *June 2023-August 2023*
- Engaged with students, and supported the check-in/check-out process.
- Developed an office inventory on Excel.
- Created and emailed surveys to 2019, 2021, and 2022 alumni of two co-curricular (e.g. CATALYST and CURIE) Cornell programs to gather data on their current educational statuses.
- Organized alumni dataset and calculated alumni admission metrics for the Cornell University College of Engineering.
- Published the data in an Impact Report presented to potential donors for the programs.

## RECENT PROJECTS

**Brownian Motion**                                                                                                  *March 2024*
*Project for PHYS4410: Advanced Experimental Physics*
- Utilized microscope imaging and particle tracking Python software to analyze Brownian motion of small polystyrene beads in water, applying the law of atmospheres to determine physical constants.

**Arduino Pulse Rate Monitor**                                                                            *February 2024*
*Project for PHYS4410: Advanced Experimental Physics*
- Built a pulse rate monitor with an Arduino microcontroller and developed an algorithm to determine pulse rate.

## ACADEMIC STRENGTHS

- *Mathematics:* Real & Complex Analysis, Numerical Analysis, Differential Equations, Linear Algebra, Probability, Statistics, Discrete Structures, Stochastic Processes, Computational Algebra
- *Physics:* Classical, Quantum & Statistical Mechanics, Electromagnetism, Circuits, Electro-Optics, Biological Physics, Nanoscience
- *Programming:* Object-Oriented Programming, Web Design, Scientific Computing

## CAMPUS INVOLVEMENT

**Cornell University Jazz Ensemble**                                                                *September 2021- Present*
*Trumpet Player*
- Attend bi-weekly rehearsals and regularly perform in concerts on campus.

## ADDITIONAL INFORMATION

**Language:** Italian (intermediate)
**Technical Skills:** Python, Java, MATLAB, Excel, HTML, CSS, Javascript, Electronics & Microcontrollers, Microscopy, Nanofabrication, Laser Design
**Interests:** Jazz, Tennis, Swimming, Cooking