

Michael “Mio” Petrizzo

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Education

Georgia Institute of Technology | Atlanta, Georgia | Computer Science (AI) & Mathematics (Data Science) | Fall 2026 - Present

Commack High School | Commack, New York | Computer Science/Science Research | September 2022 - June 2026

- 103+ GPA, Top Cohort Distinction
- 12 APs (9 Self Studied), 4 IB HLs, 3 IB SLs.

Research

Brookhaven National Laboratory WDTs AI Big Data Science Summer Research July 2026 - August 2026

- Selective research program for AI and data science application partnered with the Jefferson Lab.
- Culminating capstone project emphasizing research development.

SFDiff: Diffusion Denoising Probabilistic Model (DDPM) for State Estimation of Nonlinear Systems July 2025 - June 2026

Mentored by Dr. Djuric and Dr. Ravishankar at Stony Brook University.

Awards: Long Island Science Engineering Fair (2026) 2nd Place Grand Award | New York State Science Engineering Fair (2026) 3rd Place Grand Award | Citadel Securities Innovation Prize: 100\$ (2026) | Regeneron Science Talent Search (2026)

- Utilized DDPMs without prior data assumptions to perform forecasts through guidance.
- Generalizable model which achieved better accuracy with fewer training samples and assumptions than modern models.

Building a Conversational AI Medium to Enhance Psychotherapy Training with Virtual Patients August 2024 - June 2025

Publication: https://www.scipedia.com/public/Petrizzo_2025a Patent: 63/772,435

Awards: Long Island Science Engineering Fair (2025) 2nd Place Grand Award | Junior Young and Youth Engineers Meta Finalist (2025) **Top 10/1346** | New York State Science Engineering Fair (2025) | Junior Science and Humanities Symposium (2024)

A Novel Approximation of the Collatz Conjecture Through Discrete Fourier Transforms September 2024 - June 2025

Awards: Long Island Math Fair (2025) - Gold Medal

- Discovered sinusoidal trends present within the frequency of high-strength integers to predict continued high values.

Utilizing BERT for the Detection of Depression in Social Media Messages

September 2023 - June 2024

Publication: https://www.scipedia.com/public/Petrizzo_2024a

Awards: Long Island Science Engineering Fair (2024) | New York State Science Engineering Fair (2024) | South Asian American Women's Alliance (2024) Honorary Mention | Long Island Math Fair (2024) Gold Medal

Brookhaven National Laboratory ML/AI Research Program

June 2024 - September 2024

- Expanded Python-based introductory Machine Learning.
- Worked with laboratory experts to continue a research project into the school year.

Wharton High School Data Science Competition: Soccer Playoff Predictions

June 2024 - August 2024

- Real-life data science competition for predicting soccer match outcomes.
- Developed predictive AI models and gained experience.

Experience

Phew.AI | Commack, NY | Machine Learning Contractor

April 2024 - Present

- Created classification and regression AI to solve task-specific company issues
- Successfully reduced business costs by 50% through efficient algorithms
- Developed business-level code and effective program presentations

Neuralseek | Virtual | AI Agentic Developer Intern

July 2025 - September 2025

- Developed 2 Agentic AI Certifications with students from Georgia Tech.
- Worked on an independent project to use AI Agents for stock predictions
- Discussed ethical AI usage in business through multi-national perspectives

The Coder School | Volunteer Tutor | Commack, NY

September 2021 - September 2022

- Taught younger students introductory programming and independent project development
- Assisted students in developing core programming skills, such as for-loops and if-statements.
- Led interactive lessons in Scratch and Python

Leadership

National Science Honor Society | Elected President (2025-2026)

2024-2026

- Responsible for all chapter events and seasonal meetings to promote scientific engagement among members (150+).
- Taught core science fundamentals across biology, computer science, earth science, and chemistry.

Computer Club | President (2025-2026) | Vice-President (2024-2025)

2022-2026

- Taught AI fundamentals, web and app development, and quantum computing to members (40+) through hands-on sessions.

Chess Club x2 | Vice-President (2024-2026) | Founder (2022-2023)

2021-2026

- Founded the middle school Chess Club for casual play of all skill levels.
- Host tournaments for competitive play for 70+ members

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Extracurricular Activities

Legislative Advocacy Committee	2023-2026
Selected to advocate for better mental health policies and changing testing requirements at the state and local level. Responsible for partnership with local mental-health organizations.	
Presidents Council	2025-2026
Selective handful of students in presidential positions of influential clubs/societies to organize major events and discuss school issues. Responsible for integrating the value of science and AI into potential curriculum.	
Science Olympiad	2023-2026
School-based science competitions at the local and regional level in various specialized fields. 3x A-team for school ranking, ranked 8th place in material science and chemistry at the regional level.	
Varsity Math Team	2023-2026
Selective math-related competitions and practices to engage students. Competed in AMC and local competitions. Developed skills in problem-solving and difficult mathematics.	
Brookhaven National Laboratory - Spark Program	2022-2023
Computing class which taught aspects of Matplotlib and Numpy. Fundamental introduction to data science, complex programming, and accurate plotting.	
Honor Societies:	
National Tech Honor Society (2023-2026) National History Honor Society (2023-2026) National Math Honor Society (2024-2026) National Italian Honor Society (2024)	

Awards and Achievements

Harvard Science Research Conference - 1st Place	2023
Project Entitled: Preventing Dengue: Controlling Mosquito Populations Through Recyclable Traps and Education	
- Created a cheap mosquito trap by utilizing fermented rice water. - Combined multiple scientific fields and worked within a group to create a proposal.	
QubitXQubit Quantum Computing Course - 1200\$ Scholarship Recipient	2023-2024
Project Entitled: Creating BB84 Via Arrays	
Developed a quantum computing protocol with no assistive libraries.	
National Top School Recognition	2025
National Merit Scholarship Corporation - Commended Scholar	2025
AP Scholar with Distinction	2025
Northwell World Mental Health Day Conference	2024
Selected from school to attend and build teamworking skills.	
School Subject Awards:	
IB Chemistry HL	2026
IB Physics SL	2025
Computer Science	2024
Earth Science	2022
Recognition for demonstrating traits of a Model Learner	2023
Recognition in the St. Joseph's Regional High School Programming Competition	2024

Certificates

NeuralSeek Certification Level 1 and Level 2 (2025) | Certificate of Introductory Machine Learning (2023) | Certificate of Merit x3 (2023, 2024 x2) | Certificate of Excellence (2024) | Certificate of Quantum Computing (2024) | CPR Certified (2023-2025) | Lifeguard Certificate (2023-2025)

Skills

Python (2016-Present) | Java (2023-Present) | Machine Learning (2023-Present) | Quantum Computing (2023-Present)