

JohnPaul Nguyen

johnpaul.nguyen@rutgers.edu | +1 609-505-1013 | github.com/jpnguyennn | linkedin.com/in/jpnguyennn

EDUCATION

Rutgers University, School of Arts and Sciences Honors Program

B. S. Computer Science, B. A. Mathematics — GPA: 3.710

New Brunswick, NJ

September 2022 – May 2026

- **RELEVANT COURSEWORK:** Data Structures, Systems Programming, Software Methodology, Linear Algebra, Multivariate Calculus, Differential Equations, Discrete Structures, Theory of Probability, Software Methodology

Egg Harbor Township High School

Atlantic County, NJ

EXPERIENCE

Undergraduate Research Assistant | Rutgers University

June 2023 – January 2025

- Collaborated with five other researchers to redesign the principal investigator's simulation of flying insects.
- Increased the efficiency of the simulation **tenfold**, utilizing the NumPy and matplotlib Python libraries.
- Contributed to the beta code by reimplementing the foundational method of the simulation.
- Created applicable links to connect the simulation and real-world drone application.
- Executed extensive testing to simulate wind forces against insect wings with **minimal error** compared to real-life measurements

PROJECTS

TomboPY | Python, MATLAB, NumPY, matplotlib

August 2023

- Simulated physical forces on the flight of the Japanese dragonfly.
- Analyzed output to debug discrepancies in the feathering of later timesteps.
- Created diagrams and force graphs to analyze directional movement
- Provided alternative coding standards to allow the program to perform more efficiently

RUVSA Main Website | NextJS, TailwindCSS, Prisma, PostgreSQL, tRPC

June 2024

- Utilized tRPC to ensure type-safe programming and reduce hydration errors.
- Utilized Prisma to create a user-friendly admin panel for the executive board to change website content, such as events and media.
- Currently part of a sponsorship package to send to outside companies to promote VSA and gain sponsors for our events.

ACTIVITIES AND LEADERSHIP

Rutgers Vietnamese Student Association

May 2023 - Present

Cultural Chair

- Created engaging events and social posts that promote the Vietnamese culture to the general student body
- Prepared logistics to host events within the university
- Reconnected with the New Jersey Vietnamese American Community Association (NJVACA) and assisted with many major Vietnamese holiday events

School of Arts and Sciences

June 2024 - Present

Computer Science and Mathematics Grader

- Acted as a grader for numerous levels and disciplines of mathematics and computer science at Rutgers University
- Assisted professors in the grading of students' assignments
- Evaluated students' assignments, providing quality personal feedback to assist their learning process

SKILLS

PROGRAMMING: Java | C++ | C | Python | HTML/CSS | JavaScript/Typescript | MATLAB

TECHNOLOGIES: PyTorch | pandas | NextJS | ReactJS | Tailwind CSS | Django | REST APIs | NumPy | matplotlib | Prisma | Supabase | Vercel | GitHub | PostgreSQL | tRPC