Nathaniel Viana

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Education

Rensselaer Polytechnic Institute Troy, NY

Bachelors in Computer Science Expected May 2027

GPA: 3.2/4.0

Relevant coursework: Data Structures, Introduction to Algorithms, Introduction to AI

Experience

Intern New York, NY

NYC Parks Department Jul 2020 - Aug 2020

- Collected, analyzed, and logged environmental and maintenance data for urban parks and recreational areas, ensuring accuracy and consistency across records.
- Used Excel and data visualization tools to analyze and maintain large datasets, improving record accuracy..
- Collaborated with supervisors and team members remotely to meet deadlines and improve operational efficiency.

Projects

PSoft Tools - Open-Source Software Development Project January 2025 - May 2025

- Contributed to the development of a software platform that helps students learn key computer science principles.
- Designed and implemented tools for testing Hoare Triples and validating counterexamples using Java enhancing the applications usability.
- Collaborated with a team in an open-source environment, honing skills in React, Java, and Dafny, and Agile methodologies.

RL Racetrack April 2025

- Built a reinforcement learning agent using Q-learning to navigate a racetrack from start to finish without going off track.
- Integrated a pre-built Gymnasium-compatible environment to train a Q-learning agent, using Pygame for visualization.
- Tuned parameters and reward strategies to improve the convergence and learning rate of the agent.

Barbell Benders - Workout Tracker Backend March 2024

- Developed a RESTful backend system, login, and CRUD operations for workouts.
- Integrated PostgreSQL for storage and documented APIs using Swagger UI.
- Deployed the backend using Docker and followed clean code principles with modular design.

Activities

Coding&&Community Vice President September 2023 - May 2025

- Organize community events such as hackathons and weekly lessons teaching young students the basics of computer science.
- Gained leadership and teaching skills when helping host these events and lessons.

Additional

Language Skills: English, Spanish

Technical Skills: Java, Python, C++, Spring Boot, React, Docker, Git, PostgreSQL, TypeScript, Flask

Volunteer Experience: Coding&&Community Instructor