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, Computer Organization

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 - Present
- 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 and effectiveness.
- Collaborated with a team in an open-source environment, honing skills in React, Java, and Dafny, and Agile methodologies.

Stock Tracking Application   February 2025
- Developed a full-stack web application using React and Flask, enabling real-time stock lookups via the Alpha Vantage API
- Optimized API call frequency through caching strategies, reducing external requests and improving performance
- Strengthened proficiency in Flask by applying best practices in error handling, modular code design, and asynchronous data fetching.

Basic Search Engine   March 2024
- Created a program that imitates a simple search engine.
- Implemented methods such as web crawling, query searching, and page ranking using recursion.
- Gained experience with implementing fundamental search engine components such as web crawling, query parsing, and page ranking.

Activities

Coding&&Community Vice President   September 2023 - Present
- 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: C++, React, Python, Java

Volunteer Experience: Coding&&Community Instructor