

Nestor S. Frontera Rocher

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EDUCATION

Software Engineering Bachelor's | Project Management Minor,

May 2026

University of Puerto Rico, Mayagüez Campus (UPRM)

Relevant Courses: Intro and Adv. Programming, Data Structures, Intro to Software Engineering

Google Tech Exchange Program 2024

Jan 2024 – Apr 2024

- Semester-long program with courses taught by Google Software Engineers, Applied Data Structures, 1-on-1 mentorship, & career planning support.

PROFESSIONAL EXPERIENCE

Software Engineer Intern | Python | LangChain | Azure Open AI | Prompt Engineering |

May 2024 – Aug 2024

YAML | Bicep | KQL, Microsoft

Washington, USA

- Led the development of an internal chatbot that automated data retrieval from the team's KQL database, significantly reducing manual workload.
- Leveraged Azure OpenAI models, LangChain, and Python while conducting prompt engineering to optimize the chatbot's queries and responses for greater efficiency.

Part-Time SWE | Vue.js | Typescript | Docker | Express.js | Directus | Qwik.js | Ionic,

Feb 2024 – Present

Loadjs (Start Up)

Carolina, Puerto Rico

- Spearheaded the migration of a codebase to a new framework, enhancing functionality and accelerating the development of a Minimum Viable Product (MVP).

STEP Software Intern | C++ | JavaScript | TypeScript | Angular Dart, Google

May 2023 – Aug 2023

California, USA

- Designed, developed, and deployed a robust debugging utility on Google App Engine to seamlessly translate internal signals into easily understandable formats for improved debugging efficiency. The utility is supported as a Chrome extension and WebApp.
- Enhanced utility functionality by creating a conversion algorithm and detailed C++ APIs to process privacy signals, automating the translation of intricate internal signal representations into human-readable formats, thereby streamlining the debugging process and elevating productivity for multiple teams.

RESEARCH EXPERIENCE

Research & Competition Member | Panda Hat & Pink Pandas

Aug 2023 – present

- Actively enhancing expertise in penetration testing and attack mitigation through participation in Capture The Flag (CTF) and Red vs. Blue cybersecurity competitions.

PERSONAL PROJECTS

Tutoring App | React Native | Python | Node.Js | Supabase(DB)

- Contributed to a collaborative project developing a versatile app designed to bridge students with tutors, incorporating functionality for students to register as tutors. Implemented a sophisticated matching algorithm to pair students with the ideal tutor based on their specific needs and class requirements. Ensured cross-platform compatibility, making the app accessible as a web application and on both Android and iOS platforms.

Huffman Tree | Java | Data Structures

- Developed data compression algorithm that takes a string and by constructing a special binary tree with the frequencies of each character. This tree generates special prefix codes that make the size of each string encoded smaller, thus saving space.

EXTRACURRICULAR EXPERIENCE

JPMorgan Chase & Co.Virtual Hackathon

- Secured 2nd place for innovative security solutions (collaborated with a diverse 4-person team).

Microsoft Sustainability Virtual Hackathon

- Awarded 1st, 2nd, and 3rd place for solutions addressing water shortage, light pollution, and human waste challenges over 3 consecutive competition semesters (collaborated with a 4-person team).

SKILLS

Python | C#/C++ | Java | HTML/CSS/Javascript | Dart | Angular Framework | React | Node JS | Prompt Engineering | Unity |
LangChain | KQL | Proto Buffs | AGILE Development | YAML | Bicep | Team-oriented | Problem-solver