Sofía M. Barrera Vega (They/She)

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EDUCATION

Computer Science and Engineering Bachelor's (CIIC) | Project Management Minor   May 2026
University of Puerto Rico Mayagüez - UPRM
Relevant Courses: Intro to Programming, Advanced Programming (OOP), Foundations of Computing & Data Structures

Coursera - Google Professional Certificate UX Design Course | Figma | Adobe XD

CodePath - Web Development Course | HTML | CSS | Javascript

PROFESSIONAL EXPERIENCE

Cloud Systems Software Engineer Intern | Deloitte   Jun 2023 – Aug 2023
- Developed an application to enhance cost management strategies by enabling automatic cost comparison and savings tracking
- Delivered a tracking visualization tool that facilitated significant cost savings for the organization

Advocate | Computing Alliance of Hispanic Serving Institutions (CAHSI)   Aug 2023 – present
- Assist 5 computing departments in retaining 1500+ Hispanic computing students by increasing participation in educational activities
- Communicate with companies like Google to attract sponsorship opportunities for research groups, activities, and associations.

Allyship | Computing Alliance of Hispanic Serving Institutions (CAHSI)   Aug 2023 – present
- Support 100+ women of color in computing majors by actively participating in activities to build a sense of community
- Demonstrate role modeling and provide advice to women of color who are new at software/computer majors

RESEARCH EXPERIENCE

Competition & Research Member | PinkPanda Cybersecurity Group   Aug 2023 – present
Advised by Professor Nayda G. Santiago
- Developing penetration testing and attack mitigation skills by competing in CTF/Red vs Blue cybersecurity events

Competition & Research Member | Team LiDron based autonomous landing system   Jan 2023 – Aug 2023
Advised by Professor Nayda G. Santiago | Sponsored by Raytheon and Lockheed Martin
- Developed autonomous landing and driving for aerial and ground vehicles
- Researched object recognition, AI & software architecture to implement movement recognition

EXTRACURRICULAR EXPERIENCE

Computer Alliance of Hispanic-Serving Institutions (CAHSI)   Aug 2021 – present
- Active member in tech activities, professional development workshops, resume reviews, mock interviews & collaborative coding club

Microsoft Sustainability Virtual Hackathon   Oct 2022
- 3rd place winners - Solved real-life PR's human waste challenge in collaboration

Microsoft Sustainability Virtual Hackathon   Apr 2022
- 1st place winners - Solved real-life water shortage challenge in collaboration

JPMorgan Chase & Co. Virtual Hackathon   Nov 2021
- 2nd place winners - Solved real-life security challenge in collaboration

PERSONAL PROJECTS

RPG Game - "Spooky Quest" | C++ | VSCode | GitHub   2022
- Implemented if/else/switch statements for game mechanics, characters, and HUD
- Gained proficiency in inheritance & polymorphism by introducing game elements

Fractals | C++ | VSCode | GitHub   2022
- Demonstrated inheritance/polymorphism for interconnected fractal & mastered refactoring, restructuring abstract and superclasses
- Utilized recursion to generate fractals (Sierpinski Triangle, Barnsley Fern, Koch SnowFlake, etc.)

Battle Snake - "Noodle" | API | Python | Replit   2021
- Utilized if/elif statements to calculate snake's positions and employed for loops to manage snake movement
- Utilized dictionaries to implement intelligent behaviors (avoiding obstacles, seeking food)

SKILLS

- Python | C/C++ | Java | HTML | CSS | Javascript | VSCode | Figma | Adobe XD | Git/GitHub | SQLite | Linux | Debugging

- AGILE Development | Bilingual (English/Spanish) | Team-oriented | Active listener | Creative Thinker | Problem-solver