

Francisco Marrero Miranda

Cel. 787-219-4960

francisco@franciscomarrero.dev

Puerto Rico

Portfolio - <https://franciscomarrero.dev/>

SKILLS

Programming Languages: C++, Python, GDScript (Godot Engine), C# (Unity Engine), Dart (Flutter), Java, MariaDB/MySQL, PHP, HTML.

Software: Godot Engine, Unity Engine, Android Studio, Flutter, Docker, Github, Vim/Neovim.

Operating Systems: Linux, Windows

Other Skills: Bilingual (English/Spanish)

PROJECTS

Open source contributions:

GEQO (Godot Environment Query Orchestrator) Oct 2025 – Present

- Developed a C++ GDExtension plugin that adds new runtime nodes and behaviors to the Godot Engine.
- Implemented a high-performance, node-based environment query system for AI and gameplay logic in Godot Engine 4.
- Designed automated CI/CD pipelines with GitHub Actions for multi-platform build, test, and artifact packaging.

Prototypes:

Signal Lost Oct 10, 2025 – Oct 20, 2025

- Collaborated in a two-person team to design and deliver a 3D game prototype.
- Used Git and GitHub for version control, branching, and team-based collaboration.
- Implemented core gameplay systems and player mechanics in Godot using GDScript.

Space Hazard Jan 17, 2025 – Jan 31, 2025

- Collaborated in a five-person, cross-functional team to design and deliver a 2D game prototype.
- Implemented core gameplay systems, player mechanics, and AI behaviors in Godot using GDScript.
- Led task planning and team coordination, distributing work across programmers, artists, and audio contributors.
- Used Git and GitHub for version control, branching, and collaborative development workflows.

EXPERIENCE

Journal Student

August 2024 – May 2025

University of Puerto Rico, Arecibo

- Diagnosed and resolved backend issues in PHP-based counseling website, improving appointment logic, UI behavior, and MySQL query performance.
- Configured Raspberry Pi with Klipper firmware for 3D printer control; deployed Mainsail interface and integrated Obico for remote print monitoring with AI failure detection.
- Calibrated, maintained, and upgraded 3D printers (Ender 3 Pro, Ultimaker 2+) including silent board installation and Z-axis alignment for improved print reliability.

Work Study Assistant

August 2023 – May 2024

University of Puerto Rico, Arecibo

- Contributed to web development tasks for university platforms, implementing HTML/CSS improvements and performing basic PHP debugging.
- Assisted in the setup and support of campus-wide events, including tech demos and student orientation.
- Performed maintenance on campus 3D printers including nozzle unclogging, Z-bed tramming, and lubrication.

Undergraduate Research Student in Bioinformatics

January 2023 – May 2023

University of Puerto Rico, Arecibo

- Modified existing Python code following specifications provided by research advisor.
- Conducted experiments on Linux server through a combination of bash and Python scripts.
- Enhanced L1PD software used for detecting LINE-1 sequences in the human genome.

EDUCATION

Bachelor of Science in Computer Science (ABET-CAC Accredited)

University of Puerto Rico, Arecibo, Puerto Rico, 06/10/2025

GPA: 3.18

EXTRA-CURRICULAR ACTIVITIES

CSSA - Participation in Student Association.

ICPC - Participation in competitive programming.