

Francisco Marrero Miranda

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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, Fusion360, Blender, OrcaSlicer, Klipper, Docker, Github, Vim/Neovim.

Operating Systems: Linux, Windows

Other Skills: Bilingual (English/Spanish)

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 printer control; deployed Mainsail interface and integrated Obico for remote print monitoring with AI failure detection.
- Modeled functional and educational 3D assets (e.g., Arecibo Lab replica, Sphero Maze) using Fusion 360; exported and sliced models using OrcaSlicer.
- 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

PROJECTS **Open source contributions:**

- GEQO (Godot Environment Query Orchestrator)
<https://github.com/gego-godot/gego>

Video games:

- Signal Lost, 2025
<https://marrero171.itch.io/signal-lost>
- Undead Pet Grooming, 2025
<https://marrero171.itch.io/undead-pet-grooming>
- Space Hazard, 2025
<https://marrero171.itch.io/space-hazard>
- The Green Planet, 2024
<https://marrero171.itch.io/the-green-planet>
- Hell on Train, 2024
<https://marrero171.itch.io/hell-on-train>
- Bullet Shooter, 2023
<https://marrero171.itch.io/bullet-shooter>

EXTRA-CURRICULAR ACTIVITIES CSSA - Participation in Student Association.
ICPC - Participation in competitive programming.