Alejandro A. Perez Pabon

San Juan, PR | LinkedIn | Email | Website | GitHub

EDUCATION

University of Puerto Rico- Mayagüez   **Mayagüez, PR**
BS Software Engineering

Expected May 2026

- **Relevant coursework:** Calculus 1, 2 and 3, Linear Algebra & Differential Equations, Intro to Programming, Advanced Programming (OOP), Foundations of Computing (Discrete Math), Data Structures and Algorithms, and Intro to Software Engineering
- **Organizations/Clubs:** RoboBoat, AFIM, ColorStack UPRM

TECHNICAL EXPERIENCE / PROJECTS

RoboBoat - Software Division   *August 2023 – Present*

- o Developed unit tests with **unittest** to make sure the code was correct.
- o Participate in weekly meetings to catch up on tasks and gather ideas.
- o Assisted the team with fundraising activities.

Crack the Crime Code   *February 2023 – March 2023*

- o Developed a **Java** project that involved being a police department with the tasks to arrest the boss of every criminal organization and generate a case report file on the total arrests.
- o Utilized **Linked Lists** to store the names of boss' underlings and arrest them. Upon completion of the sprints, the algorithm fully generates a case report regarding the status of the organization.

Huffman Code   *March 2023 – April 2023*

- o Successfully developed a Huffman Encoding algorithm in **Java** that takes an input string and returns the encoded string and the difference in bytes.
- o Utilized Data Structures concepts, such as **Linked List, Hash Table, Sorted Linked List,** and **Binary Tree** to create the Huffman Encoding algorithm.
- o Javadoc comments were added to enhance the understanding of the code and **JUnit** testers were used to achieve perfect implementation.

Particle Simulator   *September 2022 – October 2022*

- o Accomplished a functioning Particle Simulator with **C++** and **OpenFrameworks** where users can change the behavior of the particles through key binds. Some behaviors are incrementing/decreasing particle speed, replaying the key binds the user recorded, and creating a "magnifier" that increments the size of each particle when it passes through said magnifier.
- o Used C++ basic concepts like method implementation, loops, and basics of OpenFrameworks.

Spooky Quest RPG   *October 2022 – November 2022*

- o Implemented an RPG game using **C++** and **OpenFrameworks** that has three levels and a boss in every stage, and a combat system inspired by "rock-paper-scissors".
- o Outlined by a four-phase sprint.
- o The game offers features, such as increased speed with "Shift" key bind, "g" key bind enabling God mode (invincible), and a friend and pet NPC.
- o Used C++ advanced concepts like pointers, inheritance, abstract methods, and vectors.

SKILLS & PROFICIENCIES

- **Programming:** Python, C++, Java, React Native
- **Technologies/Frameworks:** GitHub, Visual Studio Code, Javadoc, Unit Testing, openFrameworks, Python Virtual Environments, JUnit, unittest, Microsoft (Excel, PowerPoint, Word)