Justin Almendral

Game Programmer

CONTACT.

- Boston, MA
- xxx@mail.com
- github_link_here
- justinalmendral.com
- xxx.xxx.xxx

EDUCATION.

Northeastern University
Dec 2022 • GPA: 3.95

B.S. Computer Engineering

Minors:
- Game Design
- Robotics

Relevant Coursework:
- Object-Oriented Design
- Game Programming
- Fundamentals of Engineering Algorithms

SKILLS & INTERESTS.

Game Engines •
Unity, Godot, Ren'Py

Programming Languages •
C#, C++, Python, Java
Javascript, MATLAB,

Software and Tools •
Git, FMOD, Trello,
Confluence, Notion,
Fusion360, Aseprite,
Ableton Live 10

Organization Leadership•
- NU Game Development Club - Social Chair
- BSA - Eagle Scout

Interests •
Music Composition, 3D
Printing, Hiking, Pixel Art

PROJECTS.

Battle on Pixel Hill, Programmer   *Aug 2022*
- Mock-2D multi-perspective lane-based defense game developed in Unity in a 64x64 resolution that uses orthographic views to display a 3D environment.
- Co-developed hierarchal state machine system for switching perspectives that changed game behavior, displayed UI, and active Cinemachine camera.
- Developed lane railgun system using scriptable objects and observer pattern to handle and decouple cooldown and firing behavior.
- Created wave spawning system with lane randomization and adjustable cooldown.
- Implemented railgun attack animation and collider behavior via Unity Animator.
- Worked asynchronously with two other gameplay programmers via Git

Field Hospital Valkyrie, Programmer   *July 2022*
- UI-based hospital management sim developed in Unity for WebGL about providing care to patients via dice rolls while balancing staff morale.
- Designed decoupled event-driven day-night-cycle gameplay loop and display system using Scriptable Objects and Observer Pattern.
- Implemented vertical layer-based dynamic audio system using FMOD in coordination with composer and technical sound designer.
- Created back-end data structures for main gameplay elements alongside systems for transferring scriptable object data via drag-drop functionality.

Lethal Position, Programmer   *July 2021*
- Augmented reality adventure-puzzle game developed in Unity with the ARFoundation package for the android platform.
- Implemented 3D environment and created interactability via raycasting on tap.
- Designed scripts for sequential dialogue triggers and customizable numerical locks.

EXPERIENCE.

ReGame-XR Lab, Research Assistant • Boston, MA   *July 2022 - Present*
- Working with PhD candidate on virtual reality game developed in Unity studying the effect of visual noise on eye-hand coordination of children with Autism Spectrum Disorder.
- Refactored C# project codebase from Static Singleton pattern to event-driven scriptable object architecture using observer pattern and single-responsibility principle.
- Designed and implemented logging of hand and eye tracking data from a Vive Pro Eye and Manus SteamVR Pro Tracker to a CSV file for data analysis.

MatrixSpace, Intern • Burlington, MA   *Sep 2021 - Feb 2022*
- Trained neural networks in Python using Pytorch and Jupyter Notebooks for the recognition of vehicles and people in 360 degrees camera images
- Implemented depth and tiled image detection analysis networks to approximate the average depth of drones and people detected in 360 degrees camera images
- Converted the Monodepth2 neural network into ONNX and TensorRT files for the efficient running of depth and detection analysis on the embedded Jetson Nano platform

General Dynamics Electric Boat, Co-op • New London, CT   *Feb 2021 - Jun 2021*
- Managed and documented over 300 unit test requirements for embedded software using IBM Rational DOORS
- Designed plans for and conducted 10 unit tests using VectorCast and IBM Rational Change for embedded software programmed in ADA
- Provided data for determining OS by analyzing network performance samples between Linux and VXWorks using KernelShark and Wind River Workbench