Timothy Harrell

Location: Chicago, IL

SUMMARY

Unity Developer with hands-on experience driving the design, development, and release of interactive and engaging single and multiplayer video games. Motivated Self-starter focused on crafting fluid and engaging experiences for players around the world.

SKILLS

- **Engineering:** Creative Direction, Content Creation, Gameplay Design & Development, Core Game Loop Design, Player Experience, Playtesting, Fullstack Development, Frontend & UI/UX, Backend & Infrastructure, Testing & Code Coverage, DevOps, Data Analytics, User Research, 2D & 3D Graphics, Animation, Software Quality, Performance, Reliability, Documentation
- **Leadership:** Strategic Planning & Execution, Project Management, Process Improvement, Cross-functional Collaboration
- **Technology:** Unity (Coroutines, UnityActions & Subscribing, ScriptableObjects, Frame lifecycle, NavMesh, NavMeshAgents, Mecanim Animator Controller, Final IK, Unity IK, Root motion, URP, Cinemachine, Custom Editor Inspectors, Gizmos, Scene Management, Object Pooling, LODs, Profiler, AudioSource, AudioMixer, Reverb Pass Zones, Heathen Unity Steamworks), C# (LINQ, POST Requests), Devops (Git, PlasticSCM, CI/CD), Agile (standups, code review, jira, trello, sprints)

RELEVANT EXPERIENCE

Independent Unity Developer **April 2020 - Present**

- Spearheading the design, development, and release of innovative single-player and multiplayer experiences focused on delighting and engaging players with compelling narratives and responsive gameplay loops for Windows OS.
- Developed and implemented new gameplay systems, mechanics, and fully-realized levels complete with collision detection and resolution, progression and rewards, and clear objectives and rewards that promote player agency and choice.
- **Project Lilith**
    - Created a single-player third-person survival horror/shooter game with exploration elements, such as weapons, ammunition, health packs, and upgrades distributed around the world to promote exploration.
    - Implemented complex and intuitive observational puzzles and challenges requiring players to interact with items around the world to diversify and pace gameplay.
    - Built a strategic and rewarding movement system that emphasizes individual actions and decisions in combat.
    - Introduced buildings and props to enhance player immersion by leveraging low-poly building models to flesh out the environment and cover up inaccessible areas while maximizing gameplay performance using Unity Profiler.
    - Implemented NPC dialogue branches based on the NPC being talked to and the current quest state, with a skip button for the dialogue UI to enable players to choose between set options or skip dialogue entirely.
    - Determined enemy pathing to the player and for avoiding obstacles using Unity Navmesh.
    - Leveraged Animator Root Motion to drive velocity and rotation and enable realistic enemy movements.
    - Created scripted cutscenes with readable dialogue to pace gameplay, make characters feel alive, and allow for more detailed explanation of the game's narrative focused on an interdimensional apocalypse using Unity timeline.
    - Securely stored player save data, including quest progress, enemies defeated, and items, using JSON serialization.
- **Synth Race**
    - Designed, developed, published, and launched a multiplayer parkour racing game in Unity with 20 unique and engaging levels that challenge players to navigate a series of difficult jumping and racing stages all in 1st person.
    - Established systems for P2P services by leveraging the Steamworks API for Transport with Valve's free relay servers for P2P hosting, while leveraging a variety of techniques to reduce network load and payload frequency, including only sending player positional updates when moving and splitting player vertical look directions 3 ways.
    - Created a leaderboard UI to showcase worldwide leaderboard times for each level with friend-only leaderboards, mastery times, and gameplay information for completed levels.
    - Introduced unlockable player skins and hats for completing mastery times and collecting hidden tokens in levels to promote player expression and implement repeatable gameplay loops to increase engagement.
    - Created multiple types of obstacles, including grind rails, moving blocks, gravity lifts, super slides, rotating platforms, and wall runs to provide a diverse array of parkour-based challenges to players.
    - Implemented item mechanics that enable players to pick up and use randomized items against other players.
    - Built a system to track and record each player's placement over a number of races and created a cutscene highlighting the top 3 players, their skins, and total scores on a podium with a variety of camera angles.

Computer Science Tutor, Tutor.com **December 2022 - November 2024**

- Provided one-on-one tutoring sessions to up to 10 high school and college students per week on Java, C#, and general back-end web development concepts while identifying and capitalizing on new opportunities to improve student outcomes.

Java Developer, JP Morgan Chase **November 2019 - April 2022**
Contractor, JP Morgan Chase **October 2018 - November 2019**

- Developed, deployed, and maintained fullstack corporate banking systems, including a microservice system and an account management solution, for clients such as Disney and Coca-Cola using Ember.js, Java, Spring, Spring Boot, NoSQL, and SQL.
- Wrote tests for code contributed with at least 90% code coverage and 100% pass rate using JUnit and Mockito.

EDUCATION & CERTIFICATIONS

- Bachelor of Arts in Biology with Minors in Mathematics & Chemistry, University of Redlands
- Fullstack Development Bootcamp, Revature
- Unity Associate Programmer