# Timothy Harrell

## Summary

Unity Programmer with 3+ years creating single-player and multiplayer projects, seeking employment with a studio or team working on Unity-based games or applications. Specialized in gameplay systems and user interfaces, with a strong emphasis on clean, modular, and maintainable code architecture. Additionally, I have prior 3+ years in full-stack web development at JP Morgan Chase.

## Experience

**Unity Freelance Developer** – Apr 2022 to Present
Released online multiplayer parkour game, and developed other demos and prototypes in Unity.

**Synth Race** - Released (2025) - 2 developers
1st-person online multiplayer parkour game

- Utilized Steamworks API and relays for player connectivity, leaderboards, and achievements
- Designed 20 custom levels featuring grind rails, wall-runs, rotating platforms, and more
- Developed collectible power-up mechanics similar to Mario Kart
- Implemented session memory to allow player reconnection without progress loss
- Employed Custom Inspectors and Scriptable Objects for levels, obstacles, and cosmetics data
- Led tri-weekly Scrum meetings and tracked tasks using Trello

**Project Lilith** - Archived (2022 - 2024) - solo developer
Third-person survival horror shooter, 4 hour demo

- Combined Navmesh with root motion for visually realistic enemy movement
- Implemented extensible and modular AI system, using RNG and player state to determine enemy behavior
- Utilized Pixel Crushers Dialogue System to create NPC dialogue system with auto branching based on quest states and skip functionality
- Built Quest system and integrated with dialogue system to reward players with items
- Tracked enemies defeated, inventory state, weapon state, and quest state in JSON save files
- Utilized Inverse Kinematics for weapon and combat animations

**Delivery Corp** - Archived (2025) - solo developer
First-person shooter survival horror, prototype

- Built a modular first-person full-body system using a single humanoid rig with custom transform overrides in LateUpdate for consistent pose control
- Implemented transition system to smoothly switch between cutscenes and player control
- Built staged firearm reload system that allows resuming the reload when it was interrupted
- Developed Footstep type detection system, works with tagged gameobjects and terrain

**Associate Java Developer** – JPMorgan Chase – Oct 2018 to Apr 2022
Full stack developer responsible for developing and maintaining corporate banking management front and backend codebases.

- Developed banking management systems in Java Spring, SQL, NoSql, Ember.js
- Supported full and rolling deployments by analyzing logs and fixing deployment failures
- Delivered 90%+ test coverage using JUnit/Mockito with 100% pass rate
- Collaborated in an Agile development environment

## Additional Experience

**Computer Science Tutor** – Tutor.com – Dec 2022 to Nov 2024
Coached 10+ students weekly in C#, Java, and backend development fundamentals

## Skills

**Unity and Game Dev**: Animator, NavMesh, Inverse Kinematics, uGUI, ScriptableObjects, FSM, Custom Inspectors, Animation Rigging (Unity IK), Vector/Quaternion Math, Profilers, LODs
**Unity Plugins:** FImpossible Animation Designer, Umotion Pro, Final IK, Microverse, Magica Cloth 2
**Programming and Frameworks:** C#, Java, javascript, Spring, Ember.js, SQL, NoSQL, Junit, Rider, Visual Studio
**DevOps:** Git, PlasticSCM, CI/CD

## Education & Certifications

- **B.A. in Biology**, Minor: Math & Chemistry – University of Redlands
- **Unity Associate Programmer** Certification
- **Full-Stack Dev Bootcamp** – Revature