Mark Steelman

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Education	**Duke University** **Bachelor of Science in Computer Science** Courses included: Intro to AI, Data Structures, Algorithms, Computer Architecture, Operating Systems, VR Systems Research Experimental Interface Design, Multivariable Calculus, Linear Algebra, Probability, Discrete Math For CS.	Durham, NC Aug 2015 – May 2019

Relevant Work Experience

Transfr – Senior Unity Engineer — New York City, NY — Jul 2021 – Present

- Convinced the VP of Engineering to let me start an internal team to build and maintain the gameplay mechanics across our growing library of 200+ hands-on VR job skills training simulations, and hired two senior engineers as direct reports
- Built out a new mechanics development process spanning early scoping and prototypes to production ready code with a robust API and documentation, and ran this process with my team on 80+ simulations with an average duration of 20-30 minutes
- Sole developer of a new feature to streamline the hand pose creation process using Quest hand tracking and scriptable objects
- Helped build our new XR design team by creating a new design interview format, reworking our production process to begin design prototyping much earlier in parallel with copy editing, and onboarding designers to learn our existing gameplay mechanics
- Fixed critical release process issues to prevent regression bugs and ensure robust in-headset testing to catch bugs earlier

StudioRx – Experiential Developer — New York City, NY — Oct 2019 – Jun 2021

- Shipped and led the development of a multiplayer VR game over the course of 4 months by implementing gameplay and networking with Unity, working with motion graphics to achieve a polished look and feel optimized for the Oculus Go (Android), and communicating with the client and creative to perfect the desired user experience
- Contributed (ongoing) to our team's research and development efforts with the latest software and hardware in the VR/AR industry, such as hand tracking (Oculus Quest, Leap Motion), Unity networking solutions (Normcore, Photon, Mirror), volumetric video, 3D scanning, WebXR, Unity render pipelines, body tracking (Azure Kinect), virtual production, and social VR interactions
- Built a web based interactive data discovery experience over the course of 2 months by learning and using Unity's WebGL exporter, optimizing high quality 360 renders for WebGL, and refining UX elements and timing with the creative team
- Developed and shipped an interactive conference display over the course of 1 month by integrating the Azure Kinect Body Tracking SDK into Unity, modifying 3D assets to react responsively to passers-by, and conducting user testing
- Completed a 10-week web development course to then create prototypes of WebAR applications using 8th Wall's Javascript engine, which I pitched to our creative director as alternative interactive production offerings considering COVID-19 restrictions

Tenebris Lab – Intern Program Manager — Cape Town, S.A. — Jun 2018 – Jul 2018

- Managed the work progress of all 13 interns throughout the internship, tracking assignments and ensuring effective teamwork
- Led the design meetings for a new project with an international bank interested in using VR to improve their customer experience
- Monitored the interns' learning objectives for improving their understanding of Unity development throughout the internship
- Assisted the interns with Unity development by teaching them how to fix errors and how to use relevant developer resources
- Worked on the enemy AI system and level design for a new bow shooter game using Unity and Google Blocks

iXperience – Teaching Assistant and Workshop Instructor (Virtual Reality Course) — Cape Town, S.A. — May 2018 – Jul 2018

- Built the curriculum for the VR course by working with the head teacher to put together homework, lesson plans, and projects
- Helped students with their Unity tutorials and projects during workshop time in class and office hours outside of class
- Lead the 360 video class project by assigning the students to film around Cape Town and editing the footage in Adobe Premiere
- Took over and taught the last week of class while the head teacher was away and organized the final presentations
- Redesigned the course curriculum for the introductory VR workshop by consolidating key content from the full curriculum and creating new lecture material about broader topics in the VR industry to shift the focus away from Unity development
- Managed logistics for the course and workshop such as organizing course resources, scheduling, and hardware setup

Duke Immersive Virtual Environment (DiVE) – Unity Developer and Researcher — Durham, NC — May 2017 – May 2019

- Designed and conducted a research study on the benefits of teaching introductory computer science topics with 6DOF augmented reality hardware by developing two versions of a tutorial on the concept of inheritance – a PC application and a Magic Leap One application – and comparing subject performance and opinions on the tutorials
- Designed and conducted a research study on the effects of 3D models on memory in an effort to provide evidence that 3D models can improve performance in memorization tasks in VR, using Unity and the HTC Vive to develop our experiment application and following the IRB approval procedure
- Worked on the design of a 3D object selection technique in VR that allows users to simply look at an object to select it, using Unity and eye tracking VR hardware (FOVE VR) that provides real-time gaze information

Skills

Skills	**Technical Skills:**	**Proficient:** Unity, C#, Java, Python, Adobe Premiere **Prior Experience:** C++, Excel VBA, Matlab, Adobe Photoshop, Final Cut Pro, SolidWorks, Machine Shop Certified
	Language Skills:	Fluent in English and Spanish
	Interests:	AI, 3D Printing, Saxophone, Drums, Guitar, Video Games, Skiing, Soccer, Basketball