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CARRER OBJECTIVE

I am seeking a development position that requires strong analytical and problem-solving skills, as well as communication between technical and non-technical team members specifically within the Virtual Reality, Augmented Reality, or 3D spatial field.

TECHNICAL SKILLS

Programming: C#, Java, SQL (T-SQL, PostgreSQL), HTML, CSS
Hardware: Meta Quest 2 and 3, HTC Vive and Vive Focus 3, Microsoft Hololens 2, Azure Kinect camera, Intel RealSense camera, Ultraleap Leap Motion controller, iPad
Applications: Unity3D, Visual Studio, Xcode, IntelliJ IDEA, Unreal, MS Dynamics 365 for Hololens
Source Code Management: Azure DevOps, GitLab, GitHub, Bitbucket, Fork

XR WORK EXPERIENCE

Specular Theory   *February 2024 – Current*
VR Software Engineer
Livermore, CA
- **XR Developer for Defense & Aerospace:** Delivering cutting-edge XR training systems for the U.S. Air Force using the HTC Vive Focus 3.
- **Efficient System Management:** Regularly implement Singleton design patterns in C# to manage core systems such as game managers, audio controllers, and data handling across multiple scenes in Unity projects.
- **Custom Editor Tooling:** Develop advanced Custom Editor scripts in C# to extend Unity's editor capabilities, optimizing workflows and enhancing in-game object manipulation and debugging processes.
- **Pilot and Co-Pilot Multiplayer:** Implement multiplayer functionality using Photon Unity Networking (PUN) to synchronize pilot and co-pilot interactions, with step-by-step procedures for takeoff and landing.
- **API Integration & Device Management:** Implement UnityWebRequest calls to interface with the company's device management API, enabling real-time tracking of application version numbers and ensuring cross-platform compatibility.

Baltu Technologies Inc.   *April 2023 – February 2024*
XR Developer
San Francisco, CA
- **XR Developer**: Specializing in immersive experiences using Unity3D and C# with MonoBehaviour.
- **Lead Developer on "SuperDoc"**: Built an AR workforce training app for iPads, enabling task management and training. Added features for data retrieval/updates via WordPress server and led code refinement and bug fixes.
- **VR Training for CPLC**: Developed a VR app for Chicanos Por La Causa to educate high schoolers about careers in semiconductors and aerospace using UltimateXR for cross-device compatibility and object interaction.
- **iOS & VR Management**: Managed iOS AR app deployment via TestFlight and optimized VR applications for Meta Quest 2.
- **Apple Vision Pro**: Attended Vision Pro Lab at Apple HQ, tested hardware/software, and converted "SuperDoc" for Vision Pro using Unity's visionOS experimental mode and Xcode. Researched tools like SwiftUI and Reality Composer Pro.

Accenture   *November 2018 – April 2023*
XR Developer
San Francisco, CA
- **XR Developer Consultant**: Worked with Disney, Goodwill, Docomo, Syracuse University, Boeing, and power companies, providing XR development solutions.
- **Led Development**: Managed teams for two VR training apps on Quest, focusing on interview prep for veterans, military spouses, and formerly incarcerated individuals. Reused architecture for future VR training apps using Unity3D, C#, Speech to Text, and AVPro for video.
- **Augmented Reality Development:** Developed two AR proof of concepts using Microsoft Toolkit (MRTK) and HoloLens 2. The first PoC featured video calling utilizing WebRTC and Photon Unity Networking (PUN) for real-time communication. The second PoC integrated Google Maps Platform for landmark navigation and included Optical Character Recognition (OCR) detection.
- **Volumetric Capture & XR Media**: Managed XR media tech including volumetric capture, Looking Glass, VR, and AR. Built studios and created hand-tracking applications in Unity. Filmed an NFL player for a volumetric live-streaming project for ESPN Edge.
- **AI Character Development**: Supported Disney StudioLab in building an AI Storm Trooper using Unreal Engine and Python. Integrated face/speech detection via Azure Cognitive Services, and used OpenVino for pose detection.
- **Unity3D for Igloo Dome**: Converted VR apps to Igloo 360 Projection Dome. Integrated data analytics using Cognitive3D and multiplayer using Normcore.

XR BOOTCAMPS

XR Bootcamp   *June 2020 – August 2020*
Hand Tracking Development with Unity
San Francisco, CA
- **Hand Tracking Course**: Completed an 8-week online course and certified in Hand Tracking and Interaction Design for Quest.
- **XR Bootcamp Projects**: Developed holographic UI, locomotion, kinematic object interactions, and animations with DOTween using Hand Tracking.
- **Teleportation**: Implemented finger pinch teleporting, smooth teleportation with a vignette effect to reduce motion sickness, and snap point mechanics.
- **Holographic UI**: Built a double pinch gesture to open/close menus, animated UI with DOTween, added radio buttons, and created animated sliding bars.
- **Grabbing & Interactions**: Developed kinematic grabbing with appropriate colliders, object respawning, and breakable objects based on collision velocity.

Circuit Stream (formally Academy of VR)   *September 2017 – November 2017*
Virtual Reality Development with Unity
Vancouver, Canada Area
- **Virtual Reality Course**: Completed a 10-week online course on VR app development using Google VR SDK, OpenVR SDK, SteamVR plugin, and VRTK Toolkit in Unity.
- **Storytelling Project**: Designed a VR piece, "Lifestyle," combining modern dance, visuals, and music to illustrate how music shapes lifestyles. Utilized TextMesh Pro and Trail Renderers to highlight lyrics in the performance.
- **Educational VR Game**: Developed "Hide and Seek Kitty Cat," a math quiz/seek-and-find game for 1st graders on Google Cardboard. Implemented EventTriggers, Particle Systems, Raycasting, and Animator control via C#.
- **"Dancing Queens" Project**: Created an app showcasing two methods for animating GameObject paths in Unity: using Rigidbody.MovePosition and the iTween plugin with custom ease types.

XR PROJECT CONTRACTS & HACKATHONS

Alice in The Gardens   *October 2023*
- Developed and showcased HoloLens 2 immersive AR storytelling experience at various art and light festivals including Art Basel Miami, Oakland Autumn Lights Festival, and the San Francisco Visitacion Valley Light Festival.
- Marketed and promoted HoloLens 2 application creating this demo video: Alice in The Gardens to showcase the experience outside of the headset.
- Collaborated with a digital artist to enhance and make the art work more interactive and immersive using MRTK3- Hand Tracking technologies.
- Created green screen studio for Virtual Production to record actress and used chromakey shader to transform actress into a hologram.
- Used Unity3D and C# programming utilizing DOTween and Animator components for animations.
- Minted one of the digital art pieces from the experience on OpenSea and used a Looking Glass Portrait device to show and sell NFT to the public.

San Diego Comic-Con   *July 2022*
- Created Quest 2 Hand Tracking VR comic book experience to promote Comic-Con artist's newest comic book, "Captain A-Hole's Guide To Getting Old(er)".
- Deployed application on SideQuest VR platform for users to sideload to device: Guide To Getting Older and created thorough documentation on experience and sideloading procedures.
- Used MRTK2 for Hand Tracking and created hand tracking user tutorial in the experience.
- Attended San Diego Comic-Con to guide users and make sure VR storytelling experience was well executed with partnership of the physical comic book.

Mixed Reality Dev Days- Microsoft Hackathon   *June 2022*
- Created a Hololens 2 AR experience for Figure Skating coaches.
- Transmitted United States Figure Skating Rulebook into a digital AR experience using MRTK3, the third generation of Microsoft Mixed Reality Toolkit for Unity: Figure Skating AR Digital Rulebook
- Customized hologram UI canvases and implemented video capture to store videos on Hololens2 device.

2113 Labs   *August 2018*
- Developed VR music video experience called Permissions VR. Currently for HTC Vive and Quest shown to users at Comic Cons and musical events.
- Used SteamVR plugin and Oculus SDK to implement controller input where user can move around and explore the environment.
- For Steam version, created Start menu screen containing UI canvas, panel, button, SteamVR laser pointer, and TextMesh Pro.
- For Oculus version, added reflection probes, modify/added various lighting including point lights, and spent numerous hours baking the application to improve the look and performance of the environment.
- Converted original Steam version to Oculus analyzing entire project structure to optimize for Android.
- Used profiler to analyze performance and delete/deactivate unused objects, prefabs, and scripts that were unnecessarily activated in the scene.
- Help build game content for Steam via Steamworks tools. Build and package game in Steampipe to upload application to Steam for public users to download.

ForeverBlu   *June 2018*
- AR political advertising application. User points iPhone or Android camera over political poster and an animated character appears to notify users of future campaign events happening in their area.
- Worked primarily on serializing and deserializing JSON objects within Unity. Created C# scripts to read JSON file from AWS URL and parse data to play video of animated character depending on user's demographic by age and gender.
- Use Vuforia Cloud Recognition Service to store metadata containing video URLs associated with multiple Target Manager images.

EDUCATION

University of North Carolina at Charlotte – Charlotte, North Carolina   *December 2013*
College of Computing and Informatics
Bachelor of Science- Software and Information Systems
Minor- Dance