Emily Saunders

Technical Director

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*Dynamic Technical Director with a comprehensive background in immersive technology, digital storytelling, and project management. Expert in transforming complex concepts into tangible and innovative experiences, leveraging a blend of technical expertise and creative insight. Proven track record in managing high-impact projects, driving technological advancements, and leading teams toward innovative achievements.*

**Core Expertise:**

Digital Storytelling Solution Engineering Creative Development Rendering

Project Management 3D Modeling Interactive Installation Design VR & AR Technologies

**PROFESSIONAL EXPERIENCE**

**SOFTWARE ENGINEER | MADISON SQUARE GARDEN ENTERTAINMENT AND SPORTS****APR. 2021 – JUL. 2023**

* Orchestrated the design and implementation of multiple demos and review installations for Sphere technology, enhancing user experience and product demonstration capabilities.
* Developed 16k content playback and real-time rendering software for MSG Sphere, significantly advancing the venue's technological front.
* Proactively anticipated and fulfilled the technical needs of artists and content creators for live experiences at Sphere and other MSG venues, driving creative innovation.
* Created internal content for software development, effectively showcasing product capabilities and applications to potential user groups.
* Filed a patent application for an innovative spatial environment optimization concept for real-time rendering, showcasing ingenuity and expertise in software development.
* Developed detailed demos and documentation for SimVis products, substantially enhancing team alignment and communication across the Sphere project and fostering increased usage and collaborative potential of R+D products.

**TECHNICAL DIRECTOR | MADISON SQUARE GARDEN ENTERTAINMENT AND SPORTS****OCT. 2019 – MAY 2021**

* Innovative solution design and technical analysis for projection and LED systems, resulting in accurate environments for Sphere content review.
* Expertly crafted and presented design decks and live demos to key stakeholders, including executives and marketing teams, driving engagement and fostering strategic partnerships.
* Led 3D world-building initiatives for MSG Sphere, leveraging real-time rendering and pre-visualization to elevate the user experience.
* Implemented a rapid-response VR system for collaborative content reviews during COVID-19, effectively maintaining project momentum and creative collaboration.
* Successfully translated a complex .json file into a comprehensive 3D model for the MSG Sphere's Exosphere using Grasshopper, enabling accurate content mapping and facilitating the production of custom LED panels.
* Designed and deployed a VR-based content review system using Oculus Quest, maintaining project workflows for over 50 artists and executives during the COVID-19 pandemic and ensuring uninterrupted creative and operational productivity.

**TECHNICAL DIRECTOR | OBSCURA DIGITAL****MAY 2019 – OCT. 2019**

* Led the spatial and technical design for large-scale installations, delivering innovative and immersive experiences for diverse environments.
* Provided comprehensive onsite and remote support for artists and clients, ensuring seamless project execution and client satisfaction.
* Spearheaded the design, calibration, and management of advanced projection systems, enhancing visual quality and audience engagement.
* Developed a TouchDesigner solution to stream camera array feeds into a virtual venue, allowing directors and crew preview shots in a spherical format on-site for shoots.

**TECHNICAL ARTIST| RUSH V1****FEB. 2019 – JUN. 2019**

* Successfully debuted as an independent artist in a live show, demonstrating exceptional creative vision and the ability to lead and execute a complex artistic project from concept to realization.
* Developed and implemented live data-driven graphics using custom sensor solutions, enhancing performances' interactivity for dancers and audience members.
* Executed a projection-mapped immersive installation for the live show, elevating the audience experience through cutting-edge technology and creative design.
* Designed, built, and programmed wearable sensors for dancers and audience members, tracking movement and breathing patterns to capture real-time graphics and gather data for future creative projects, enhancing the interactivity and visual appeal of the live show.

**TECHNICAL TEACHING ASSISTANT | CALIFORNIA COLLEGE OF THE ARTS****JAN. 2019 – MAY 2019**

* Led comprehensive workshops for beginners in TouchDesigner, effectively clarifying complex software for first-time users and fostering an interactive learning environment.
* Provided personalized coaching and technical support to students, guiding the development and installation of interactive projects in public spaces and enhancing their practical and creative skills.

**DESIGNER | FUTURE FORMS****SEP. 2015 – MAY 2019**

* Specialized in parametric 3D modeling using Rhino and Grasshopper to streamline pre-visualization, construction design, and fabrication, enhancing efficiency and design accuracy.
* Developed pre-visualization and presentation materials for design pitches, effectively communicating project concepts and engaging potential stakeholders.
* Programmed sophisticated lighting systems using tools like TouchDesigner and Pharos Systems, contributing to creating dynamic and interactive installations.

**INTERN | CITITEK****JUN. 2014 – AUG. 2014**

**INTERN | STUDIO 440 ARCHITECTURE****JUN. 2013 – AUG. 2013**

**EDUCATION**

**B.A. | Architecture | California Polytechnic State University**

**B.A. | Architecture | Danish Institute (Study Abroad)**

**TECHNICAL PROFICIENCIES**

▪**3D Design:** Rhino 3D, Grasshopper, Blender

▪**Graphics:** Adobe Illustrator, InDesign, Photoshop, After Effects

▪**Rendering:** Octane, Maxwell, VRAY

▪**Digital Media:** TouchDesigner, Notch, Unity, Disguise

▪ **Scripting**: C#, C++ (Limited to sensor and LED-specific applications), Visual Studio, GIT

▪**Fabrication:** Laser Cutting, 3D Printing, CNC Machining