

PATRICK C. MOLEN

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EDUCATION & COURSE WORK

Masters in Digital Arts and Sciences (AR/VR Focus)

May 2021

The University of Florida, Gainesville, FL

Bachelor of Arts in Visual Art Studies, Certificate in Graphic Design

August 2020

The University of Florida, Gainesville, FL

SKILLS & Credentials

Software: Maya, Unity, Substance Painter, Git Bash, Pixyz, ZBrush, Visual Studio, Accurev, Illustrator, Photoshop, Jira

Skills: 3D Modeling, CAD Conversion, Lighting, Optimization, Texturing, VR/AR, Oculus Development, Retopology, UV Unwrapping, Rendering, Unity VFX, Animation, Rigging, HoloLens 2, Post-Processing, C#, Pooling, Batching, Procedural Animation, US Department of Defense Secret Security Clearance

EXPERIENCE

Design Engineer, Lockheed Martin

December 2021 – Present

- Work within the Logistics and Sustainment Engineering (LSE) Strategic Initiatives (SI) Emergent Visualization team.
- Assist in creating and modifying CAD models, line and rendered illustrations, static and interactive animations, user interface, 3D asset/texture development, and integration for real-time environments in Unity.
- Assist in modeling, texturing, shading, lighting, and rigging content for rendered and real-time content in AR and PC.

3D Modeler, Environmental Tectonics Corporation

August 2021 – December 2021

- Model 3D assets that contribute to different virtual scenarios within our Advanced Disaster Management Simulator. The simulator is an immersive training platform that prepares international clients for real-life situations.
- Understand Subversion source control to manage and keep our data up to date.
- Use our Linux-based proprietary system to implement and integrate data, assets, and more.

Graduate Research Assistant, Digital Worlds Institute at The University of Florida

February 2021 – August 2021

- Create a WebGL Web XR application for The Digital Worlds Institute's 20th Anniversary, showcasing programs and student works within the program through a virtual tour.
- Model, remesh, UV, and texture different 3D objects to create abstract environments and structures for VR.
- Implement a real-time destructible environment in Unity HDRP.
- Optimize projects through lighting, polycounts, culling, pooling, custom LODs and more.

Productions Student Supervisor, Reitz Union at The University of Florida

December 2017 – May 2021

- Manage and ensure that a department of over 20 employees represent the University of Florida and properly prepare events for clients and organizations within the University Student Union.
- Effectively interpret all Event Management Systems documents to determine event setup requirements.

PROJECTS

RELY3D, Lockheed Martin

December 2021 - Present

- Interactive modules provide the Apache maintenance community with 3D representations of M-TADS/PNVs part data and fault message inputs to support the reduction of maintenance-induced failures on Tablet and HoloLens 2 platforms.
- Training time reduced by up to 60% with game-like tools over traditional training.

Georgia Tech HackGT, Oculus Interaction Developer

October 2020

- Developed an application using 3 IBM Cloud API's, Unity, and Oculus, led interaction development process.
- Won 3rd place for IBM's: The Community Response to Covid-19 challenge track.

Virtual Standardized Patient, Digital Worlds Institute at The University of Florida

August 2020 – May 2021

- Collaborate with Cortino Sukotjo, DDS, PHD from The Restorative Dentistry Department at UIC to develop two VR training applications for dental students while meeting stakeholder deadlines.
- Integrate haptic finger Bebop gloves within a Unity-based training application for the Oculus Quest.