

Tres Sims

Technical Artist

Contact Info

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(813) 731-5265

Portfolio

<https://www.linkedin.com/in/tres-sims>

<https://Tres-Sims.com>

<https://github.com/TresSims>

WORK EXPERIENCE

Founder, CIO, Technical Director

Feb 2021 - Present

Digital Anatomy Simulations for Healthcare, "DASH"

- Pioneering a cutting edge 3D printing company, developing healthcare solutions for the Central Florida area
- Identifying workflow needs to reduce errors in polyjet 3D printing file export errors, and improving object creation workflows
 - Programmed and delivered a software tool in C# (ImGui, PMP Library) for previewing multiple mesh files including .STL, .OBJ, and .PLY, and packaging them into the .3mf file format, while cross-checking for common mesh errors, and validating quality standards
 - Designed tools for adding features to 3D Objects to improve 3D print quality
- Created REST API in Python (Flask) for driving Houdini FX scenes from Next JS frontend for display in WebGL environment
 - Authored a tailored experience for virtually displaying life saving device customizations in a real-time 3D environment.
 - Engineered a Houdini FX process that ingested order inputs to create a 3D model to be rendered in a WebGL real-time environment
 - Invented a REST API using Flask that would control a Houdini Engine Instance, and transfer the generated files to an AWS S3 instance
- Created AR training simulations for the Hololens using Unreal Engine
 - Implemented Perforce version control to facilitate collaboration between team members
 - Collaborated with SMEs to implement training systems
- Implementing and maintaining development pipelines for software, including PyTest testing, Docker building, VPS deployment, and Documentation

Research Assistant

May 2018 - Jan 2021

Prototype Development 3D Print Lab

- Developed and Implemented custom workflow tools using Houdini FX to optimize 3D printed object creation
 - Programmed custom file format readers for Houdini FX using Python (PyNRRD, PyDICOM, lib3mf)
- Authored multiple patents on using Computer Graphics Tools to optimize and improve the quality of cutting edge polyjet 3D Printing

Project Leader

Jan 2019 - Apr 2019

John's Wizard Dungeon Team

- Set up a perforce version control system on a VPS to facilitate collaboration in my team
- Created Unreal Engine Tools using Blueprints for procedurally scattering scene assets

- Developed shaders for magic and fire VFX
- Directed a team of 5 in creating a VR Escape Room in Unreal Engine
- Handled building and publishing game on Steam
 - https://store.steampowered.com/app/1093750/Johns_Wizard_Dungeon/

Contract Web Designer

Sep 2018 - Dec 2018

Control Laser Corporation

- Designed web-ready assets in Adobe Illustrator and Adobe Photoshop
- Created web pages using Wordpress, including copywriting and layout
- Created custom carousel element for product display using wordpress platform

EDUCATION

B.F.A Emerging Media, Experimental Animation

Sep 2014 - Apr 2019

Minor, Compute Science

University of Central Florida

- Event Director/Vice President of Game Dev Knights, Student Organization
 - Organized Game Jams for students including securing a venue, catering, and equipment
 - Petitioned SGA for scholarships to send club members to GDC
 - Taught classes on creating and implementing 3D assets using Maya, Substance Painter and Unreal Engine
- Presented a Mobile VR experience in UCF Fine Arts Gallery, Nova Exhibition

SKILLS & ACCOLADES

Skills

- | | |
|----------------------|--------------|
| • Houdini | • Python |
| • Unreal Engine | • Git |
| • Substance Designer | • Perforce |
| • Substance Painter | • Javascript |
| • Maya | • HTML/CSS |
| • Blender | • C# |
| • Adobe Photoshop | |

Certifications

- Maya Certified User

Patents

- Method for the design and manufacture of composites having tunable physical properties
 - USPTO 11,042,671
 - USPTO 10,649,440
- Deformation-based additive manufacturing optimization
 - USPTO 11,281,186
 - USPTO 10,838,402

REFERENCES

Contact For References