James Arndt

New Smyrna Beach, FL | jamesarndt3d.com | jimmyarndt@gmail.com

Senior Technical and 3D Artist with 15+ years in the gaming and real-time industries, contributing to projects for NASA, Unity Technologies, Lockheed Martin, EA, Activision, THQ, Disney/Pixar, and more. Experienced in mobile game development, having developed apps for artists such as Train, Panic! at the Disco, and Sia. Former college professor teaching Unity and game development, with a recent role at NASA Marshall Space Flight Center creating STEM-focused interactive software using Unity. Currently a Senior Technical Artist crafting immersive real-time experiences.

KEY SKILLS

Technical Skills: Hard Surface Modeling, Texturing and UV Authoring, Custom Shader Creation, Material Authoring, Environmental Lighting, Visual Effects, Environmental and Prop Art Authoring, Unity Render Pipeline Optimization, Augmented and Virtual Reality Development, WebGL Development, Android and IOS Mobile Development, 3D Asset Ingestion and Transformation, Runtime Optimization, 3D Asset Creation, Art Pipeline Creation, Visual Fidelity Enhancement and Post-Processing Effects.

Software Knowledge: Unity Engine, Autodesk Maya, Autodesk 3ds Max, Blender, Substance Painter, Adobe Photoshop, Adobe Illustrator, Adobe Premiere, Visual Studio, Visual Studio Code, Perforce, Git, Tortoise SVN, Davinci Resolve, Pixyz Studio, Simplygon, Android Studio, SpeedTree, Three.js, Adobe After Effects, Cloud Compare, Nomad Sculpt, C#, JavaScript, Maxscript, Python, HTML5, CSS3

WORK EXPERIENCE

30 Ninjas New York, NY | Contract | Remote   New Smyrna Beach, FL
Senior Technical Artist   Feb 2025 – Present

- Author and optimize shaders and materials for VR environments, focusing on mobile VR performance.

- Configure and maintain Unity's Universal Render Pipeline, ensuring efficient rendering techniques for mobile VR.

- Integrate and optimize 3D assets while enforcing best practices for triangles, texture resolution, draw calls, and LODs.

- Optimize materials, post-processing, and visual effects for real-time rendering.

- Develop real-time VFX tailored for performance in VR environments.

- Identify and resolve performance issues, profiling and optimizing CPU/GPU performance of the Quest 3 platform.

- Ensure efficient asset rendering and memory management in Unity.

- Refine VFX implementation and collaborate with the Art Lead to enhance visual quality while maintaining performance.

- Utilize tools such as 3ds Max, Maya, Blender, Substance Painter, Photoshop, Illustrator, Pixyz Studio, Visual Studio, and SpeedTree to author environments and props.

Capgemini Engineering Atlanta, GA | Full Time | Remote

New Smyrna Beach, FL

Senior Technical Artist

May 2024 – Jan 2025

- Bridge the gap between artistic design and technical implementation for real-time applications.

- Collaborate with developers and optimize workflows, producing more efficient art pipelines.

- Enhance both the rendering efficiency and fidelity of projects using the Unity engine.

- Author and optimize 3D meshes, ensuring seamless ingestion into the Unity engine from various disparate sources. Author materials and 2D textures, focusing on efficient mesh materialization and texturing.

- Optimize art content for performance across a number of platforms, such as Desktop, WebGL, Mobile AR, Mobile and Desktop VR, Android and iOS.

- Manage Unity project setup including render pipeline configuration and hierarchical storage of content.

- Author and implement environmental lighting setups and rendering scenarios for product configuration and realtime digital twin environments.

- Author HLSL shaders and Unity Shadergraphs, VFX Graph visual effects for real-time applications. This includes screen-space post-processing effects such as blur, scene transitions, etc.

- Utilize tools such as 3ds Max, Maya, Blender, Substance Painter, Photoshop, Illustrator, Pixyz Studio, Visual Studio, and SpeedTree to author environments and props.

Unity Technologies San Francisco, CA | Full Time | Remote

New Smyrna Beach, FL

Senior Technical Artist

Jan 2021 – May 2024

- Created interactive and immersive real-time experiences exclusively using Unity, focusing on technical implementation, integration, and asset optimization.

- 3D modeling, PBR and stylized materialization, 2D texturing, and art content optimization for performance across various platforms such as Desktop, WebGL, Mobile AR, Mobile and Desktop VR, Android and iOS.

- Developed and maintained art ingestion pipelines, Unity project set up, user interfaces (UI), and rendering scenarios to ensure smooth integration.

- Develop custom C# tools for the Unity editor to streamline the authoring and ingestion process, boosting productivity and improving efficiency across asset pipelines.

- Author HLSL shaders and Unity Shadergraphs, VFX Graph visual effects for real-time applications. This includes screen-space post-processing effects such as blur, scene transitions, etc.

- Unity Prefab authoring, mobile/VR/AR framework setup to streamline development and ensure cross-platform compatibility.

- Utilized a range of software including Unity, 3ds Max, Maya, Blender, Substance Painter, Photoshop, Illustrator, Pixyz Studio, Visual Studio, Cloud Compare and Speedtree for asset creation and technical integration.

NASA Marshall Space Flight Center, AL | Full Time | Remote   New Smyrna Beach, FL
Unity Multimedia Developer   Sep 2018 – Jan 2021

- Dual role as Unity Game Developer and Web Development Specialist.

- Created interactive online experiences using Unity's WebGL technology and game development tools. This included authoring game state logic, input framework setup, user interface authoring and authoring or ingestion of art content into the Unity engine.

- Developed multimedia assets for websites, educational games, multimedia presentations, and interactive displays and exhibits using Adobe Photoshop, Adobe Illustrator and Adobe After Effects.

- Authored C# code for Unity WebGL projects, aligning traditional game development with web technologies. This included merging the Unity runtime with typical HTML5 web pages. This work included ample effort to ensure compatibility with mobile devices.

- Created a variety of 2D illustrations and 3D models for various educational, interactive projects to enhance the educational nature of NASA's web-based offerings.

- Used HTML5, Javascript and CSS3 to code modern, responsive websites for use within the nasa.gov domain.

Roblox San Mateo, CA | Contract | Remote   New Smyrna Beach, FL
3D Artist and 2D Artist   Feb 2018 – Jan 2021

- Authored various 3D assets based on provided concepts or imagery, ensuring high levels of detail and optimization. This included both organic and hard-surface modeling.

- Produced highly-optimized UVW texture coordinates for 3D meshes to ensure performance at scale.

- Imported assets into Substance Painter for materialization and texturing, applying a stylized/hand-painted rendering aesthetic.

- Authored various in-game assets, including hats, armor, weapons, toys, clothing, shoes, and other adornments for digital avatars in a virtual sandbox environment.

- Utilized Autodesk 3ds Max, Adobe Photoshop, and Substance Painter for asset creation and 2D texturing.

Lockheed Martin Orlando, FL | Full Time | Hybrid   New Smyrna Beach, FL
3D Artist and 2D Artist   Feb 2016 – Feb 2018

- 3D modeling and 2D texturing tasks, constructing and processing 3D meshes and textures for usage in multiple large-scale simulation databases.

- Gathering photographic reference, creating 3D meshes with 3DS Max and Autodesk Maya, processing these meshes with Presagis Creator and creating 2D textures using Adobe Photoshop.

- Typically be tasked with authoring 3D models and materials for military and commercial vehicles, commercial aircraft, various ships and real-world buildings and structures. Responsible for consistent art style, quality levels and performant assets within the SAGE engine. Ensured that any implemented assets were constructed performantly so as not to impact the overall frame time.

EDUCATION

Daytona State College Daytona Beach, FL | Full Time   Ormond Beach, FL

Computer Programming AS Certificate   May 2019

Full Sail University Orlando, FL | Full Time   Altamonte Springs, FL

Bachelor of Science Computer Animation   May 2007

Defense Information School Fort Meade, MD | Full Time   Fort Meade, MD

4611 Combat Illustrator (US Marine Corps)   Feb 2000

REFERENCES

- Natalie West (Director of Unity's Metaverse Studio) | nataliekwest@hotmail.com
- Ben Rosenoff (Director of Capgemini Spatial Computing) | brosenoff@gmail.com
- Darcie Kerr (Project Manager) | darcienkerr@gmail.com
- Sven Boesen (Capgemini Engineering Studio Director) | sven@boesen.net
- Bruce Burnham (Manager) | Bruce@BRNM.ca
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