

James Arndt

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

Senior Technical and 3D Artist with 16+ 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

Standard Logic Labs

Principal Technical Artist/Consultant

New Smyrna Beach, FL (Remote)

February 2025 - Current

- Client: Santa Barbara Games
 - Own animation implementation, lighting, and atmospheric systems for a stylized survival roguelite in Unity to maintain a cohesive, readable visual experience.
 - Develop custom stylized shaders utilizing Shader Graph and HLSL.
 - Optimize rendering performance in URP (LOD strategy, overdraw, draw calls, shader variants) for PC and Steam Deck platforms.
 - Act as the primary technical bridge between art and engineering teams to keep visuals, performance, and pipelines in sync.
- Client: HitTrax
 - Led research and development for a scalable animation framework for virtual baseball players using Unity's Mecanim system and the Animancer plugin.
 - Prototyped layered state machines, blend trees, and custom animation states to achieve realistic athletic behaviors like pitching, batting, fielding, and catching.
 - Partnered with designers and engineers to ensure the framework supported both visual realism and long-term codebase maintainability.

- Client: 30 Ninjas
- Specialized in material and shader development for VR environments, building performant, customized solutions for mobile XR rendering pipelines.
- Profiled CPU/GPU bottlenecks to optimize rendering efficiency, establishing best practices for triangle counts, texture resolutions, draw calls, and LOD usage to hit strict VR target frame rates.
- Refined real-time VFX, post-processing, and particle implementation to enhance overall visual quality without sacrificing runtime performance.

Capgemini Engineering

Senior Technical Artist

New Smyrna Beach, FL (Remote)

May 2024 - January 2025

- Bridged the gap between design and technical implementation of real-time applications, producing more efficient art pipelines.
- Enhanced both the rendering efficiency and fidelity of projects using the Unity engine.
- Authored and optimized 3D meshes, ensuring seamless ingestion into the Unity engine from various disparate sources. Authored materials and 2D textures, focusing on efficient mesh materialization and texturing.
- Optimized art content for performance across a number of platforms, such as desktop, WebGL, mobile AR, mobile and desktop VR, Android and iOS.
- Authored and implemented environmental lighting and rendering scenarios for product configuration and real-time digital twins.
- Authored HLSL shaders and Unity Shadergraphs, VFX Graph visual effects for real-time applications. This included screen-space post-processing effects such as screen blur, scene transitions, etc.
- Utilized tools such as 3ds Max, Maya, Blender, Substance Painter, Photoshop, Illustrator, Pixyz Studio, Visual Studio, and SpeedTree to author environments and props.

Unity Technologies

Senior Technical Artist

New Smyrna Beach, FL (Remote)

January 2021 - May 2024

- 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.
- Authored HLSL shaders and Unity Shadergraphs, VFX Graph visual effects for real-time applications. This included screen-space post-processing effects such as blur, scene transitions, etc.
- Mobile VR and AR Unity project setups, including framework diligence, technical implementation, integration and asset optimization.

NASA Marshall Space Flight Center

Unity Multimedia Developer

New Smyrna Beach, FL (Remote)

September 2018 - January 2021

- Served in a dual capacity 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

3D Artist and 2D Artist

New Smyrna Beach, FL (Remote)

February 2018 - January 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

3D Artist and 2D Artist

New Smyrna Beach, FL (Hybrid)

February 2016 - February 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.

n-Space

Technical Artist

Orlando, FL (Onsite)
April 2015 - January 2016

- Served as Technical Artist on Sword Coast Legends, supporting both in-game and front-end visual systems.
- Created 2D texture masks for a dynamic coloring system used in the customization of characters, creatures, and armor.
- Balanced and tuned materials and coloration across characters, weapons, and creatures under varying lighting conditions.
- Maintained albedo, normal, and specular texture consistency across hundreds of assets within a measured PBR pipeline.
- Authored and maintained shader and material setups to ensure cohesive visual quality across game systems.
- Illustrated numerous 2D icons and interface elements for menus and in-game UI.

EDUCATION

Daytona State College

Computer Programming AS Certificate

Ormond Beach, FL
May 2019

Full Sail University

Associate of Science (A.S.) Computer Animation

Altamonte Springs, FL
May 2007

Defense Information School

4611 Combat Illustrator (US Marine Corps)

Fort Meade, MD
February 2000

REFERENCES

- Natalie West (Director of Unity's Metaverse Studio) | nataliekwest@hotmail.com
- Darcie Kerr (Unity Project Manager) | darciengkerr@gmail.com
- Sven Boesen (Capgemini Engineering Studio Director) | sven@boesen.net
- Bruce Burnham (Capgemini Manager) | Bruce@BRNM.ca
- Glen Schulz (Unity Manager) | schulz.glen@gmail.com
- Julian Halliday (Unity Manager) | npc_oo@hotmail.com
- Yasthil Bhagwandeem (Unity Co-worker) | <https://yasthil.com/contact>
- Richard Livingston (n-Space Co-worker) | richardclivingston@gmail.com