Bradley Newman

Versatile Technical Artist with a rich background in video game development and XR research. Proficient in Maya, Unity, Python, and C#, alongside experience with shaders, procedural texturing, rigging, and animation. I excel at streamlining art pipelines, optimization, and tool development. From leading the pipeline for a cross-platform MMO, to pioneering XR applications for psychological therapy, my journey reflects a commitment to innovation and creativity. With a proven ability to mentor teams, optimize workflows, and deliver high-quality, performance-driven content.

Portfolio: https://www.bradleynewman.io/
GitHub: https://github.com/bradley-newman
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Experience

Career Break, Des Moines, IA Mar 2023 - Dec 2023

Professional Development

- After a mass layoff I took a break, but continued my professional development by creating a Maya to Unity asset pipeline example, a Substance Designer example, and sharpening my VFX skills in Unity URP

Age of Learning, Glendale, CA

Technical Artist Feb 2020 - Feb 2023

- Spearheaded the art pipeline development for a cross-platform educational MMO named Adventure Academy, by developing automation tools and asset management processes from Maya to Unity, resulting in streamlined workflows and increased efficiency.
- Created reusable character rigs, shaders, animation systems, and store UI for a large library of pets players could adopt, increasing average time per player per week by 70 mins, and average weekly visits from 6.5 to 9.5 times.
- Led profiling efforts across desktop and mobile platforms, devising and implementing memory and framerate optimization strategies, reducing memory requirements by 210 mb which expanded our minimum specification support and enhanced overall game performance.
- Pioneered a Pokémon-style prototype featuring trivia and pet adoption mechanics, which evolved into the core strategic direction for the product.
- Engineered Mobile Optimized Shaders and Uber shaders, optimizing graphical performance across various devices, enhancing visual fidelity and gameplay experience.
- Produced compelling cinematics, enriching the narrative and immersion of the game, elevating the overall storytelling experience for players.
- Collaborated closely with Creative and Art Directors to ensure the delivery of high-quality content meeting stringent performance requirements, contributing to enhanced player satisfaction.
- Mentored junior artists on optimizing content creation processes, addressing technical challenges, and fostering a culture of continuous improvement, resulting in a more proficient and cohesive team.
- Conducted training sessions for designers on prefab best practices and level building techniques, as well as engineers on profiling methodologies, leading to improved cross-disciplinary collaboration and project outcomes.
- Defined and standardized pipelines for art outsourcing, coordinating with internal and external producers, ensuring consistent quality and adherence to technical specifications.
- Played a pivotal role in documenting project development environments and onboarding procedures, improving team efficiency and knowledge transfer processes.

Visible Things, Los Angeles, CA

Freelance Technical Artist, Software Engineer Sep 2019 - Feb 2020

- Engineered a bespoke VR 360 video player with an intuitive tablet UI for seamless video selection and playback.
- Automated the connection process between Pico VR headsets and Android tablets via Bluetooth, streamlining setup procedures and improving user accessibility.
- Implemented a system for generating Unity asset bundles to allow filmmakers to easily incorporate new videos into the application, facilitating rapid content updates to users.

RareFaction Interactive, Los Angeles, CA
Co-Founder, Technical Artist, Designer May 2016 – Mar 2019

- **Fujii**
  - Streamlined the art pipeline for the mobile VR game Fujii to automate asset creation / exporting, resulting in increased efficiency and reduced development time.
  - Created animation blend trees and C# scripted behaviors for NPCs, enhancing character interactions and immersion within the game environment.
  - Implemented targeted optimizations to minimize draw calls, generate LODs, and execute custom culling techniques, ensuring a smooth gameplay experience.
  - Collaborated on level design, prototyping, and construction efforts, contributing to the creation of immersive and engaging game environments.
  - Conceptualized and prototyped gameplay mechanics for musical plants, enriching gameplay dynamics.
  - Crafted detailed environments and plant models, leveraging modeling, texturing, and shading expertise to enhance visual fidelity and immersion within the game world.
- **AR Soccer Replay**
  - Developed a proof of concept AR app for sports replay.
  - Created a realistic animated character executing a soccer ball kick into a net, capturing the essence of sports gameplay.
  - Collaborated on the design and creation of intuitive UI / UX enabling control over replay scale and speed.
  - Programmed mechanics controlling replay functionality, animations, and special effects, enhancing the user experience within the augmented reality environment.
- **VR Badminton**
  - Played an instrumental role in the development of a VR Badminton game for a Malibu Rum promotion, amplifying brand engagement and polishing user interaction.
  - Designed and implemented a user-friendly UI with 3D button functionality.
  - Created the majority of the immersive environment, encompassing lighting, water effects, plant life, fish animations, and post-processing effects, elevating visual appeal and immersion for users.
  - Developed a custom chaperone boundary grid, improving user safety and comfort during gameplay sessions.
  - Collaborated on character and environment design to create a captivating immersive world.
- **VR Interactive Music Project**
  - Created virtual objects that could be thrown and broken into pieces which then fell and played sounds synced to musical beats, allowing users to craft experimental physics based compositions.
  - Contributed to the development of irreverent UI elements for musical sequencers.
  - Implemented a voice sampler feature, enabling recording and playback of synchronized singing performances, enriching user engagement and musical creativity.
- **VR Architectural Walkthrough Visualizations**
  - Developed a visualization of trade show booths enabling clients to teleport around the space, aiding efficient design evaluation by reducing the need for physical prototypes.
  - Engineered a menu system featuring a 3D laser pointer for selecting each experience, enhancing user navigation efficiency.
  - Crafted an interactive showcase of F-16 fighter jet capabilities, complete with an animated user interface detailing major systems and understanding of aircraft functionalities.
- **VR Brain MRI Editing**
  - Collaborated on a VR app for visualizing and editing MRI brain scans of Alzheimer's patients to accelerate understanding and analysis of medical data.
  - Designed and implemented interactive mechanics for visualizing 2D cross sections as 3D layers, streamlining data analysis and improving user efficiency in data editing

Business Development
Technical Artist, Designer, Los Angeles, CA Jan 2016 – May 2016

- Networked and developed business relationships with clients.
- Researched new technologies and sharpened technical skills.

USC School of Cinematic Arts - Worldbuilding Media Lab, Los Angeles, CA
Senior Research Associate Jan 2013 – Dec 2015

- Led a team of students in the exploration of interactive narrative techniques within VR / AR environments, resulting in the creation of various immersive storytelling experiences inspired by the book Leviathan.
- Integrated large-scale motion capture systems to develop interactive VR / AR narratives where users could walk aboard the Leviathan ship and interact with physical props, enhancing user engagement and interaction.
- Combined multiple forms of technology to enable the Leviathan whale and other creatures to interact with real-world environments and a crowd of users.
- Collaborated with industry professionals to refine research for showcase at CES and the Sundance New Frontier exhibition, resulting in positive reception and recognition from industry leaders.
- Contributed to the modeling, texturing, and shading of the creatures, boosting visual fidelity and immersion for viewers.

USC Institute for Creative Technologies, Los Angeles, CA
Technical Artist, Designer, and Administrator May 2004 – Dec 2012

- Helped pioneer the use of VR simulations for the treatment of PTSD, reducing the number of therapy sessions patients required to see improvements in symptoms.
- Spearheaded the modeling, texturing, animation, and effects to create a city with NPCs, vehicles, and a driving simulation, which allowed clinicians to gather initial data on efficacy and secure funding to expand the research.
- Managed a 9-person development team, ensuring project alignment and timely delivery of releases to clinicians.
- Designed features to trigger audio and visual effects, NPC interactions, and lighting for therapeutic effectiveness.
- Streamlined pipeline development through the creation of scripts and custom exporters, optimizing workflow efficiency and reducing production time.
- Experimented with cutting-edge technologies such as Head Mounted Projectors, Pseudo Holographic Screens, and custom Head Mounted Displays, driving technological innovation that directly inspired the Oculus Rift.
- Prototyped a motion-tracked game for motor rehabilitation to gamify therapy and make it more fun and engaging.

Micoy Inc., Ames, IA
3D Generalist, Camera Operator July 2001 – June 2003

- Contributed to a VR startup specializing in stereoscopic panoramic video technology to create pioneering immersive experiences.
- Collaborated with colleagues to explore applications for emerging VR technology, driving innovation within the industry.
- Planned and directed video productions to deliver a series of real world experiences combined with CG creatures.
- Utilized advanced techniques such as camera tracking, HDR light probe photography, and animation to enhance visual quality and realism.
- Demonstrated VR content to the public, showcasing the potential of immersive storytelling.

Skills

C#, Python, Shaders, PyMel, PyQt, Unity, Maya, Substance Designer, Photoshop, Art Pipeline, Tools, Profiling, Optimization, Mobile, FX, Modeling, Rigging, Animation, VR, AR, XR, Technical Writing

Education

University of Southern California
Masters
Interactive Media

Iowa State University
Bachelors
Fine Arts