

MICHAEL BREYMANN

TECHNICAL ARTIST // CREATIVE CODER

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San Francisco, CA

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SKILLS

Technical direction and project management for virtual productions and 3D content creation

Pipeline and artist tool development in Python, C#, and C++

Realtime 3D graphics programming for interactive and immersive experiences

12 years visual effects production experience for feature films

Expert knowledge of photogrammetry and reality capture techniques for 3D asset creation

EXPERIENCE

Technology Supervisor

Disney DTCI R&D

2017-present

Oversaw the technical strategy and implementation of virtual production techniques for animated content, using Unity as the central creation hub, for a team of 15 artists and developers. Designed a realtime pipeline from scratch to explore new ways of producing broadcast-quality animation, which resulted in Unity Technologies being awarded its first ever Technical Emmy.

Technical Artist

Microsoft

2017

Implemented a 3D environment photogrammetry workflow for Microsoft's Mixed Reality Capture Studio, using Maya, Mari, Unity, and Python and C# scripts. Developed and deployed virtual reality experiences using Microsoft's volumetric performance capture technology on Windows Universal Platform.

Co-Founder & CTO

Kaleidoscope VR

2015-2017

Project lead on *The Last Mountain* and *Mad God*, developed in Unity for Oculus Rift and Samsung GearVR. Wrote an equirectangular projection mapping plugin for Unity. Built a project database with Mongo and Angular for developers to easily share their builds. Pitched HTC and was subsequently accepted into their first VR accelerator program, ViveX, for development of an image-based rendering solution, using OpenVR and Cinder C++ creative coding framework.

Technical Director

Industrial Light & Magic

2009-2015

Designed and built photorealistic 3D environments and FX (particle/fluid dynamic simulations) for feature films. Highlights included: taking the first steps into virtual reality production with the precursor to ILMxLab, realtime lighting and rendering for the *Star Wars 1313* R&D project at LucasArts, writing asset transfer tools for instanced geometry on *Jurassic World*, building a procedurally-generated timelapse environment on *Noah*, developing a FLIP water simulation tool in Houdini for *Pacific Rim*, designing the Chitauri laser FX tool on *Avengers* for the FX and compositing departments.

VFX Pipeline Consultant

Rede Globo

2010

Developed a pipeline for building CG environments using photogrammetry, automated image processing in PERL, and structure from motion algorithms (Bundler, CMVS, PMVS2) for *Globo*, a Brazilian television studio. These tools were used in production on the popular telenovela, *Passione*.

Software Developer

Glyph Software

2006-present

Owner and 3D graphics programmer at Glyph Software, a creative technology company specializing in photogrammetry solutions for the visual effects industry. In 2007, *The Mattepainting Toolkit for Maya* was released as a commercial suite of tools leveraging traditional mattepainting techniques and camera projection onto 3D geometry. It was authored, marketed, and sold over 3 versions and 8 years to production studios around the world. See <http://www.glyphfx.com> for details.

Technical Director

Various

2004-2009

Created 3D environments and FX for feature films at Matteworld Digital, Evil Eye Pictures, and Giant Killer Robots, using primarily Maya, 3ds Max, Houdini, Nuke. See portfolio at <http://www.michaelbrey mann.com> for details.

EDUCATION

BA in English from the University of Michigan, 2001