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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++ for company-wide deployment.

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 DATG R&D  
2017-present

Oversaw the technical strategy and implementation of animated content, using Unity as the central creation hub, for a team of 15 artists and developers. Designed and built a realtime production pipeline for short-form linear narratives. Developed a tracking and management system for asset interchange with traditional 3D software packages, such as Maya.

### Technical Artist

Microsoft  
2017

Combined photogrammetry and game development techniques to create 3D environments for Microsoft's Holocapture technology, rendered in realtime for Mixed Reality headsets.

### Co-Founder & CTO

Kaleidoscope VR  
2015-2017

Project manager of *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, scoped with access privileges. Pitched HTC and was subsequently accepted into their first VR accelerator program, *ViveX*, for development of an image-based rendering solution using C++, OpenVR, and the Cinder creative coding framework.

### Technical Director

Industrial Light & Magic  
2009-2015

FX and 3D environment technical director for feature films using Houdini for particle and fluid simulations, 3ds Max and Nuke for full-CG digital sets. Wrote production tools in Python for inter-department use: a laser look development package from FX to compositing on *Avengers*, instanced jungle foliage geometry from layout to lighting on *Jurassic World*.

### VFX Pipeline Consultant

TV 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

Sole owner and graphics developer at Glyph Software, LLC, a Micro-ISV specializing in photogrammetry software for the visual effects industry, *The Mattepainting Toolkit for Maya*, which is currently in use at studios around the world.

### **3D Generalist**

Various  
2004-2009

Designed and built 3D environments and particle/fluid dynamic simulations for natural effects such as fire and water for feature films. See portfolio at <http://www.michaelbreymann.com> for details.

## **PROJECTS**

### **Disney TVA**

2017-present

Baymax Dreams

Microsoft

2017

Breakdancers "The Wheel" Holocapture Environment

### **Kaleidoscope VR**

2015-2017

The Last Mountain, Mad God

### **Industrial Light & Magic**

2009-2015

Jurassic World, Transformers 4, Noah, Captain America Winter Soldier, Pacific Rim, The Lone Ranger, The Avengers, Cowboys and Aliens, I Am Number 4, The Last Airbender

### **LucasArts**

2013

Star Wars 1313

### **Matteworld Digital**

2006-2009

Zodiac, Invincible, The Golden Compass, The Curious Case of Benjamin Button

### **Evil Eye Pictures**

2005-2009

Pirates of the Caribbean 3, Spiderman 3, Speed Racer, Ninja Assassin, 2012

### **Giant Killer Robots**

2005

Fantastic 4

### **CafeFX**

2004-2005

Sin City, The Adventures of Shark Boy and Lava Girl

## **SOFTWARE**

Houdini, Maya, 3ds Max, Unity, Unreal Engine, Nuke, Photoshop, After Effects, Agisoft Photoscan, V-Ray, Renderman, C++, Python, MEL, HTML, CSS, Javascript

Windows, OSX, Linux proficient.

## **EDUCATION**

BA in English from the University of Michigan, 2001