MARCELLA **HOLMES**

Technical Artist

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SUMMARY

I am a highly tenacious and skilled technical artist who enjoys problem solving and delivering innovative and creative solutions. I specialise in developing novel techniques and methods to solve problems, using existing software, finding new tools or writing my own code.

Over the past six years as a technical artist, I have delivered world class visual effects and technical art on a number of very successful projects for high profile clients. I believe strongly in supporting other team members as part of an inclusive work environment to deliver fantastic gaming and real-time experiences together.

EXPERIENCE

Technical/VFX Artist Jun 2024 – Present
Freelance
Worked on a variety of VFX/Creative visualisation projects including Shanghai Fashion Week live projections onto the Harrods building in London and product visualisations for clients.

Technical Artist Aug 2018 – Jun 2024
DIMENSION STUDIOS https://dimensionstudio.co
As the 'go to' person to solve complex technical problems that the rest of the team are unable to resolve, I have always overcome those challenges and been able to develop innovative solutions.

My job is extremely varied and involves many different and disparate projects from game environments to blockbuster movies and music videos, often as the only technical artist in the team.

Driving specialist tools, I process volumetric data and then optimise that data to achieve the highest quality volumetrics possible; developing tools to further improve these captures and achieving world class visual finesse as well as creating VFX assets.

I routinely create shaders and particle effects in Unreal and Unity, along with fires, sky, smoke, explosions and similar environmental effects. I also improve the pipelines for projects including writing custom tools in C# and C++ and Unreal Blueprints and minimised human errors across our team by creating an asset management tracker tool in Excel.

SKILLS

Unity - 12 years
(Unity 3 to Unity 6)

Unreal - 10 years
(UDK to Unreal Engine 5)

Blender - 17 years
(Blender 2.4 to Blender 4.0)

3ds Max and Maya - 3 years

Nuke/After Effects - 10 years

Marvelous Designer - 8 years

Houdini - 7 years

PFX Unity particle – 10 years

UE5 Cascade-Niagara - 10 years

Shaders – 10 years
(GLSL, Amplify Shader, Shader Graph, Shaderforge, Unreal shaders)

Optimisation – 10 years
Working on tech art assets for VR and AR projects. Post-Processing materials/Creative visual effects Procedural/seamless texture creation (Substance Designer) 3D asset painting/sculpting (Substance Painter, Zbrush) File playback programming (Alembic Unity/UE5, Volumetric plugins) C#/C++

EDUCATION

Degree:
Interactive Games Design

First Class BSc (Hons)
University of Gloucestershire
Sep 2013 – Jun 2017

A-Levels:

Computing	A
ICT	B
Music Technology	C

Pershore High School
Sep 2007 – Jun 2013

REFEREE

My manager for the past 4 years

Adrianna Polcyn
VFX Supervisor
Dimension Studios

aepolcyn@gmail.com

KEY ACHIEVEMENTS

2023 Client: TAIN **Project: "Fantastique World" game**

The challenge: To get a volumetric actress into a real-time 3D world where there were lots of lines of dialogue that were triggered by multi-player game play and required footage that did not exist because once captured, a volumetric is canned like a video and cannot be changed any further.

My solution: I researched a new piece of bespoke software that is uniquely able to blend volumetric clips together and using this with Houdini and Unreal I achieved seamless transitions between dialogue takes.

2022 Client: Sony **Project: "I Wanna Dance with Somebody" movie** *Credited*

The challenge: To deliver 2000 volumetric assets for the motion picture about Whitney Houston.

My solution: Created custom volumetric tools in Houdini as a node-based system to build extensive crowd scenes to be integrated into film VFX plates using motion vector work, shaders and grading.

2021 Client: Coldplay **Project: "My Universe" music video** *Credited*

The challenge: We captured volumetrics of Coldplay and Korean group BTS but these had to have a blue Fresnel outline and sci-fi artifacts. 300M+ views on YouTube.

My solution: Wrote new shaders and developed an innovative way of encoding the volumetrics face into the correct file format so that the Fresnel effect would not disfigure the character. I Also created UE5 shaders for live playback of the bands on The Voice TV show.

2020 Client: Balenciaga **Project: "Afterworld" game**

The challenge: To capture models wearing complex and often difficult to scan clothing and to recreate these accurately within the virtual world.

My solution: Augmented volumetric models with vertex tracked 3D assets and designed shaders that were integrated into a live Unreal environment to enable online live play.

2019 Client: Atlas V **Project: "Atomu" An immersive VR experience** *Credited*

The challenge: To create all of the technical art within the project.

My solution: Took over from another company that had failed to deliver and completely recreated and delivered almost all technical art in this VR Unity project. Atomu is the story set in Kenya told through colourful 3D motion tracked ballet, creative shaders and VFX. Exceptionally deep use of complex shaders and C# programmed PFX sequences.

2018 Client: Sky **Project: "Britannia" An immersive VR experience** *Credited*

The challenge: To create a real-time immersive 3D world for VR that took the player into Roman Britain.

My solution: Created PFX, shaders and VFX on the scanned volumetric performances. Accurately creating sky shader, fire, magic, water and other environmental effects all with VFX highly optimised for VR headset playback. Applied tricks involving baked mirrors and reflections and the optimisation of shader maths to create performant experiences.

PERSONAL

Introduced to computers at an early age, by three I had my first PC, playing games and educational software, becoming fixated with the technology and by ten I was creating my own games using Powerpoint. Two years later I had progressed to developing in Blender and am passionate about games, films and interactive media and particularly enjoy immersive experiences and narrative formats. Interests include vintage fashion, history of art, films and recreational maths and also home baking.