Paul Metcalfe

Lead Animator & Motion Tracking Specialist | Human Motion R&D | Physical-to-Digital Alignment

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PROFESSIONAL PROFILE

I'm a Lead 3D Animator and Motion Tracking Specialist focused on the mechanics, logic, and behavior of human movement. My background combines high-level animation direction at **Electronic Arts** (The Sims) with deep-end technical R&D at **The VOID**, where I helped build real-time full-body tracking systems. As the owner of **Mocap Central**, I am a hands-on performer and technician, utilizing **Machine Learning** and high-fidelity capture data to solve complex physical-to-digital alignment challenges.

TECHNICAL CORE

- **Full-Stack Mocap:** Performance acting, capturing (Optitrack/Xsens), data cleaning, and retargeting to diverse rigs.
- **Movement Logic:** Defining behavior via state trees and interactive systems for characters and physical props.
- **Pipeline Architecture:** Building "under the hood" systems including file tracking, version control, and naming conventions.
- **R&D Execution:** Leading cross-functional teams through early-stage, "impossible" motion technology hurdles.

PROFESSIONAL EXPERIENCE

Mocap Central | Founder & Lead Animator | 2023 – Present

- Established an independent motion capture studio (Optitrack/Xsens) to produce professional-grade animation packs.
- Perform and process all data personally, including specialized movement research like HEMA swordsmanship and everyday human movement.
- Manage end-to-end production pipelines, delivering engine-ready assets for AAA and indie developers.

Limitless Flight: JUMP | R&D Director | 2022 – 2025

- Led the R&D team in designing a full-body guest tracking system for a premium wingsuit VR simulator.
- Engineered Unreal Engine animation workflows to align physical user movement with digital avatars in real-time.
- Created all avatar content and in-experience guides, achieving a 4.9/5 guest rating for immersion and safety.

Mursion Inc. | R&D Lead Animator | 2021 – 2022

- Partnered with the CTO to develop next-gen, AI-driven avatars for live, interactive training simulations.
- Captured extensive body and facial performances to provide the nuance needed for intense conversational scenarios.

The VOID | R&D Manager & Animation Director | 2016 – 2020

- Pioneered full-body tracking systems and "VR illusions" for hyper-reality experiences including Star Wars: Secrets of the Empire and Ghostbusters: Dimension.
- Guided the character animation pipeline from the ground up, merging physical performance with digital constraints.

Electronic Arts (EA) / Maxis | Animation Director | 2003 – 2016

- **The Sims:** Directed systemic animation and behavioral AI, focusing on the logic that makes digital entities feel "alive."
- **Team Leadership:** Managed and mentored animation teams (up to 25) for Dante's Inferno and The Simpsons Game across PC, console, and mobile.

TECHNICAL TOOLKIT

- **Hardware:** OptiTrack, Xsens Link, LBE VR & Human Motion Tracking Systems.
- **Software:** Maya, Motive, MVN Animate, Version Control (Perforce/Git).
- **Implementation:** Unreal Engine, Unity, State Trees, Asset Management & Naming Conventions.

EDUCATION

- **Exeter College of Art & Design** | BA Tech Degree | Exeter, UK
- **3D Animation Specialist Certification** | Bay Area, CA