

YUNYI ZHANG

Pipeline Technical Director | Houdini TD | Lighting Technical Artist

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PROFESSIONAL EXPERIENCE

More VFX

Beijing, China | Jun 2024 - Present

Pipeline Technical Director & Lighting Technical Artist

- Designed and productionized Houdini lighting systems for **11 lighting artists**, including a scalable instancing toolset supporting up to **20,000 light instances** with procedural generation, brush-based editing, per-instance controls, and camera-aware culling for art-directable, cost-efficient setups.
- Led the production adoption of **Karma across 30+ shots**, translating Arnold-based lighting standards into a production workflow spanning AOVs, renderer-specific lighting behavior, EXR/compositing standards, pipeline tooling, documentation, and artist training.
- Owned lighting-side render troubleshooting and optimization, devising cost-effective strategies for complex shots and building targeted USD tools for motion resampling, material reassignment, crowd render attributes, PointInstancer culling, and Arnold-to-Solaris light translation.
- Designed the studio's first production denoising pipeline, integrating OIDN and RenderMan denoisers across Arnold and Karma with automated AOV processing, render-farm task dependencies, artist controls, and output validation, reducing render time by **up to 75%** on applicable workloads.
- Developed a render-cost analytics workflow that normalized render statistics embedded in EXRs across heterogeneous compute tiers and defined separate metrics for farm compute cost and normalized production turnaround, enabling clearer shot-level reporting and production planning.
- Built a scalable production data service using gRPC and Fileseq across **5 departments**, with Prometheus monitoring and custom logging supporting high-volume I/O for **70+ artists**.

DreamWorks Animation

Glendale, CA | Sep 2022 - Dec 2023

Crowds Technical Director

- Developed and productionized **15+ Python and VEX tools** for Houdini crowd simulation and animation across **2 feature-film productions**.
- Optimized crowd workflows through scalable LOD systems, improving render performance by **33% across 11 sequences** and helping accelerate sequence delivery.
- Integrated Character Effects enhancements into crowd characters, enabling memory-efficient feather rendering for **10 bird variants across 17 sequences**.
- Built automated production handoff and notification workflows that reduced manual coordination and production-management overhead by approximately **30%**.
- Coordinated cross-department R&D between Animation and Lighting, driving adoption of **10+ tools** into the Crowds pipeline.

BATS-TOI

New York, NY | Apr 2022 - Aug 2022

Unreal Developer & Motion Capture Assistant

- Built an AWS-based Unreal Pixel Streaming pipeline using C++ and shell scripting, enabling real-time web delivery of **7 high-fidelity characters**.
- Developed an Unreal Blueprint avatar customization system with **11+ wearable and animation options**, informed by user-preference and gameplay research.
- Supported character-production workflows through **12 Xsens motion-capture sessions** and authored technical documentation covering server setup, procedural art workflows, and UI iteration.

SKILLS

Programming: Python, VEX, C/C++

DCC & 3D: Houdini (Solaris/LOPs), Maya, Nuke, Unreal Engine 5

Rendering: Arnold, Karma

Pipeline & APIs: USD, PySide, gRPC, Fileseq, Rez, Deadline

Infrastructure: Linux, Prometheus, Git

EDUCATION

University of Southern California | Los Angeles, CA

Aug 2022 - May 2024

M.S. in Computer Science (Multimedia and Creative Technologies)

New York University | New York, NY

Aug 2018 - May 2022

Dual Degree: B.A. in Computer Science; B.F.A. in Film and Television (Tisch School of the Arts)