TYLER VARACCHI

Technical Artist | Pipeline & Tools | Motion Capture

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SUMMARY

Technical Artist with generalist 3D skills (texturing, animation, lighting, rendering), 4+ years. Built the mocap pipeline behind SuperPlastic's YouTube Shorts (1M subscribers in one month, 256+ videos, 232M+ views). Led 5 Unreal artists and transitioned traditional team to real-time Unreal Engine 5 (UE5). Wrote C++ retargeting tools when our Maya rig's custom deformers couldn't export to UE5. Built an AI plugin that generates 3D scenes from storyboards.

TECHNICAL SKILLS

Python • C++ • Blueprint • Unreal Engine 5 (UE5) • Niagara • Maya • Substance Painter • Substance Designer • Unity • Universal Scene Description (USD) • Rigging • Motion Capture Systems • PyTorch • Perforce • Git • Shader Development • Real-time Rendering • Pipeline Development • Optimization

PROFESSIONAL EXPERIENCE

Freelance Technical Artist | Jan 2024 – Present | During MS Program (Completed Dec 2025)

- Built StoryboardTo3D, an Unreal Engine 5 plugin that auto-generates 3D scene layouts from storyboard inputs using vision-language models.
- Benchmarked 3 vision-language models for 3D spatial reasoning as MS thesis. Got a SIGGRAPH submission recommendation from committee.
- Textured, animated, lit, and rendered 3 colorway variants for Victor Victor x Nike in Unreal. Worked directly with their design team through revisions.
- Developed real-time sculpture visualizations for Burlington and Annapolis using Cesium, Maya, and UE5. Pitched lighting animation that made the final visualization. Burlington approved and constructed.
- Guest lectured at UVM on Unreal Engine 5, Maya, and storytelling. Invited back for a second semester.

SuperPlastic | Mar 2022 – Dec 2023

Lead Technical Artist (Mar 2023 – Dec 2023)

- Led 5 Unreal artists. Coordinated with modeling, VFX, and lighting. 3-5 videos/week. Transitioned traditional team from RenderMan to UE5. Cut render time from overnight to 10 seconds/frame.
- Set up Control Rigs for 7 characters so animators and lighters could tweak in-engine without round-tripping.
- First-line approval for 100+ YouTube Shorts. Reviewed all team animations before Animation Head sign-off.
- Managed mocap lab (Xsens + Faceware). Ran weekly capture sessions with 2 actors. Captured performance to music tracks for 2 artist collaborations.
- Prototyped virtual production with VCams and real-time VTuber streaming. VCam used for shot direction.
- Scaled Perforce to 10+ artists. Unified traditional animation and UE5 short-form workflows into one system.

Technical Artist (Jun 2022 – Mar 2023)

- Built the UE5 mocap pipeline (Xsens + Faceware) for YouTube Shorts. Live Link to engine. Supervised 2 artists. Pipeline ran 256+ videos, 1M subscribers in one month, 232M+ views.
- Wrote a custom C++ AnimNode for runtime retargeting because Maya's deformers came into UE5 broken. Live mocap ran without lag or crashes.
- Converted 100+ Maya assets to UE5. Optimized materials, LODs, draw calls, and collision for real-time.
- Created Niagara VFX and Chaos destruction systems, used photogrammetry to capture mocap room for 1:1 virtual environment, and built vehicle animation capture with Take Recorder. Reused across productions.
- Set up Perforce for mocap pipeline. 3 artists, capture room. Later adopted studio-wide.

Junior Technical Artist (Mar 2022 – Jun 2022)

- Wrote Python tools for Maya. UV channel validator used by 5 artists that deleted extra UV channels.

EDUCATION

Master of Science in Digital Media | Drexel University | Dec 2025 | GPA: 3.97

Bachelor of Arts in Art and Design | University of Vermont | 2022 | GPA: 3.5