Aaron Maximiliano Cuevas

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Roles: Technical Artist (Simulation/SciVis) | Graphics/Visualization Intern | Digital Twin Prototyping

Summary

Industrial Physics Engineering student (ITESM) working at the physics–graphics boundary: simulation-driven demos, scientific visualization, and digital-twin prototypes. Strong procedural 3D pipelines in Blender (Geometry Nodes) with Python tooling, version control, and documentation. I ship reproducible deliverables (repo/video/demo) designed for technical review and iteration under changing specs.

Experience

Technical 3D Artist / Scientific Visualization & Simulation (Freelance)
Dec 2019–Present

- Build simulation-oriented 3D visualizations and prototypes: data/assumptions → analysis → scene → demo (render/animation/interactive).
- Develop reproducible pipelines with documentation and Git-based traceability; optimize for clarity, debuggability, and fast iteration.
- Core tools: Blender (Geometry Nodes), Python automation, OVITO-to-Blender workflows, Git/GitHub, Linux.

Digital Twin & Simulation Work (selected)

Optics Laboratory Digital Twin (Technical Arts / ITESM)
2025–Present

- Building a digital twin of an academic optics lab: scene structure, controllable elements, and repeatable visualization outputs for teaching/research demos.

MIT x FrED Factory (S.E.R.P.E.N.T) – Digital Twin Contributor
2025–Present

- Implemented parsing from a sensor-array / Kinect-style model into a skeletal representation for a factory-worker ergonomics digital-twin workflow.

Topology Visualization Support (PhD Héctor Medel Cobaxin, ongoing)
2025–Present

- Built a Geometry Nodes structure for visualizing data distributions (tested on Nuevo León topographic data) as reproducible figures aligned to evolving methodology.

Projects

John Deere Lawnmower – Deterministic Digital Model
2025

- Produced a clean, presentation-ready model with kinematic rigging and procedural materials; optimized for technical visualization deliverables.

LAMMPS × Blender Integration (annealing / particle arrays)
2025

- Built an integration to visualize simulated annealing (and general particle arrays) in 3D; pipeline designed for re-runs on new simulations.

BIOTAR Bioreactor – Digital Replica (Heineken Green Challenge, 2nd place)
2025

- Created a digital replica of the BIOTAR installation for clear technical communication and presentation.

Education

Tecnológico de Monterrey (ITESM)
Feb 2023 - Jun 2027

B.S. Industrial Physics Engineering (ongoing) | Focus: scientific visualization, simulation-oriented prototyping, optics

Skills

3D & Visualization: Blender (Geometry Nodes), shading, technical animation, scene optimization, OVITO.
Programming: Python (tooling/automation), C/C++ (foundational), OpenGL (foundational), Git, Linux.
Work style: reproducible pipelines, documentation, traceable evidence (repo/video/demo), technical communication.

Languages

Spanish (Native) | English (B2, TOEFL ITP 560) | Chinese (Basic)