Aurel Gruber

Generative Graphics & Creative Technology

Profile Summary

With 12 years of experience across academic research, computer graphics, machine learning and software engineering, and a background in mechanical manufacturing and automation, I bridge technical depth with creative ambition. My background spans the full 3D animation pipeline, and I am now focused on applying these skills to create immersive artistic installations and live experiences.

Contact Details

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Personal Information

Nationality: Swiss

Languages: German (Native), English (Proficient), French (School Level), Spanish (Basic)

Skills

- Academic Research: literature review, scientific writing
- Project & Team: Planning, Communication, Collaboration
- Computer Graphics: 3D Reconstruction, Geometry & Image Processing, Tracking
- Machine Learning: Training, Finetuning & Deployment (Tensorflow, JAX, PyTorch)
- Software Development: C++, Python, Git, Continuous Integration / Deployment
- Mechanical / Automation: Manual and CNC Machining, Pneumatics, Hydraulics

Experience

Early hire at startup *betterPortrait.* **2025**

◇ Developed and deployed diffusion-based and traditional pipelines for automated portrait generation and refinement, improving output quality and throughput (betterportrait.ch).

Doctoral researcher **2020–2024**
at *Computer Graphics Lab (ETH/Google joint program).*

◇ Conducted research on generative models for computer graphics (StyleGAN for textures, diffusion control, Neural Radiance Fields). One project published at Eurographics. Collaborated with Google Research on domain translation. Taught students for the lectures Parallel Programming and Linear Algebra. Four years of doctoral work (program discontinued before completion).

Co-founder at *infix.* **2015–2019**

◇ Co-founded software services company; delivered apps and IT training (ÜKs), acquired by novu (2019), infix.ch.

Internship as Computer Graphics Developer **2016**
at *Fision (later Meepl, acquired by Zalando).*

◇ Implemented geometry processing algorithms in C++ to support accurate virtual clothing reconstruction. Built interactive 3D WebGL tools for garment visualization and inspection.

Internship as 3D Generalist at *Pixcube.* **2012**

◇ Contributed across the full 3D animation pipeline (storyboarding, modeling, animation, materials and texturing, lighting, rendering, and post-production) for advertising campaigns (e.g. UBS spots).

Apprenticeship as Polymechaniker at *ETA.* **2007–2011**

◇ Apprenticeship in mechanical manufacturing (manual & CNC machining, automation with pneumatics, hydraulics and PLC (SPS) control).

Education

PhD Studies at *ETH Zürich.* **2020–2024**

◇ See section Experience

Bachelor **2013–2016**
and **Master in Computer Science** at *ETH Zürich.* **2017–2019**

◇ BSc thesis on UV mapping (Interactive Geometry Lab, ETH) — presented at Blender Conference Amsterdam. MSc thesis on statistical face models (Disney Research Zürich), Published at the Symposium on Geometry Processing. Coauthor of a paper on Numerical Optimization published at Eurographics.

Art & Creative Concepts

Lucent Willow (Concept, Burning Man 2026)

◇ Conceptualized an LED installation combining atmospheric water generation with light — evoking natural rainfall along luminous strings, see project page.

LumiGlide (Concept)

◇ Designed a “confinement cube” with haze and lasers for drone choreography in architectural space, see project page.

Skyweave (Concept)

◇ Explored drone-driven ribbon dance inspired by traditional performance art, see project page.

Hobbies

Woodworking & furniture design, climbing & mountaineering, ski touring, travel, short-form videography