Calvin Guillot

Creative Technologist | New Media Artist | Full Stack Developer

- **Portfolio:** calvinguillot.com
- **Email:** hello@calvinguillot.com
- **LinkedIn:** linkedin.com/in/calvinguillot
- **Social:** @cgxatlas
- **Location:** Helsinki, Finland
- **Origin:** Bogotá, Colombia

Professional Summary

Multidisciplinary artist, creative technologist, and engineer from Bogotá, Colombia, based in Helsinki, Finland. Dual master's degrees in New Media Arts and Automation Engineering from Aalto University, plus a Bachelor's in Electronics. Over a decade of practice spanning interactive installations, generative AI, live audiovisual performance, VR/XR, web development, physical computing, and academic research.

Works at the intersection of art, science, and technology — creating visual stories, interactive installations, immersive experiences, and large-scale pieces. Explores the sublime, infinitism, identity, emergent behaviour, and social conflict through mediums ranging from traditional painting and street art to generative AI, parametric sculpture, and artificial synthetic life.

Track record includes internationally exhibited artwork (Creative Nerd at the Cable Factory, Helsinki; Dome Dreaming Festival, Stockholm; Expo 2025 Osaka; Outsider Art Festival; Aavistus Festival; Night of the Arts Helsinki), award-winning audiovisual work (Kinomural 2023), EU-funded collaborative productions, and commercial software development for analytics platforms and SEO-driven web products.

Education

Masters in New Media Arts

Aalto University | Espoo, Finland | *September 2021 – June 2024*

Thesis: *Sonorama: Evolutionary Sonic Artificial Life* — Part of the R-Bus Project, funded by the Helsinki Art Museum (HAM). Developed an agent-based Artificial Life simulation (physarum model)

controlled by a neural network guided by a NEAT genetic algorithm, generating adaptive soundscapes from urban acoustic inputs. Approximately 1,200 people experienced the installation.

Relevant coursework: Generative Interactive Narratives, Audiovisual Electronic Interaction, Data Design, Interaction Design, Digital/Live/Web Art, Structures, Synths, Physical Computing, Storytelling, Production, Academic Writing.

Also worked as **Teaching Assistant** for the New Media Master's Programme (Feb 2023 – Oct 2023), supporting students in web technologies, generative art, AI, interactive media, and advanced coding techniques.

Also taught as **Lecturer (ARTS)** at Aalto University (March 2024 – June 2024), delivering the master's-level course on Generative AI covering diffusion systems, image/video/audio/3D asset generation including Gaussian Splatting, and VR applications.

Masters in Automation Engineering (Computer Science specialisation)

Aalto University | Espoo, Finland | *September 2018 – April 2022*

Thesis: *Human-in-the-Loop Hyperparameter Tuning of Deep Nets to Improve Explainability of Classifications* — Published as a paper for the RBCDSAI FCAI Conference on Deployable AI 2022. Funded by Aalto University and FCAI (Finnish Center for AI). Developed an interactive xAI system that places a human in the loop to iteratively tune hyperparameters of a VGG-16 classifier, Felzenszwalb image segmentator, and SHAP explainer using Bayesian Optimization, improving the sensibility of AI explanations without degrading classification accuracy.

Credits: 110/120 at time of 2021 snapshot.

Bachelor's in Electronics Engineering

Metropolia University of Applied Sciences | Helsinki, Finland | *September 2014 – September 2017*

Thesis: *Modular Distributed Sensor System*. Completed 257/240 credits. Focus on embedded systems, electronics design, automation, and programming.

Engineering Student, Mechatronics (incomplete)

Universidad de San Buenaventura | Bogotá, Colombia | *2009–2010*

Completed 2nd year (80/240 credits) before relocating to Finland.

Technical Skills

Audiovisual & Creative Technology

TouchDesigner, Max/MSP, P5.js, Processing, WebGL, After Effects, Resolume, MadMapper, DMX, GLSL (shader programming), pen plotter (Ender 3 adapted)

Programming Languages

Python, JavaScript/TypeScript, C, C++, C#, R, D3.js, HTML/CSS

AI & Machine Learning

PyTorch, TensorFlow, Stable Diffusion (ComfyUI, AnimateDiff, img2vid, ControlNet, IP Adapter, SDXL), Generative Adversarial Networks (GANs), Computer Vision (OpenCV), Gaussian Splatting (Lumalabs, SuperSplat, Jawset Postshot), NEAT evolutionary algorithms, SHAP (Explainable AI), Bayesian Optimization, LLMs (Ollama, Gemma, local inference), ElevenLabs (voice synthesis), Fal.ai API (Wan2.2, video generation), MLOps, Data Analysis

Web & Mobile Development

React, Vue.js, SvelteKit/Svelte 5, Node.js, Firebase, Google Cloud Services, AWS, Supabase (PostgreSQL), Capacitor (Android/iOS), Flask, REST APIs, HTML/CSS, TailwindCSS, SEO optimisation, data visualisation (D3.js, Recharts)

3D & Fabrication

Blender, Fusion 360 (Autodesk), Rhino, Cura, MeshLab, Gaussian Splatting, photogrammetry, origami/compliant mechanisms, 3D printing (FDM — Creality Ender 3), parametric design, minimal surface modelling

Hardware & Physical Computing

Arduino, Raspberry Pi, sensor fusion, circuit bending, electronics design, CUE (AV control), Crestron, Oculus VR/XR, motion tracking, embedded systems, DMX lighting control

Design

Adobe Photoshop (advanced), Adobe Illustrator (intermediate), Figma (intermediate), InDesign, Inkscape, UI/UX design, vector design, image processing, prototyping

Project Management & Collaboration

Jira, Trello, Agile, Scrum, stakeholder management, event production, curation, technical direction

Work Experience

Lead Developer & Strategist | Hoy Holdings

2026 – Present

Spearheading the development of a portfolio of high-performance websites and mobile applications targeting the sports betting and SEO market. Implementing advanced SEO strategies, analytics pipelines, and data-driven user acquisition systems. Building mobile-first products with React/SvelteKit and native integrations.

Technologies: React, SvelteKit, Node.js, Capacitor (Android/iOS), SEO tooling, analytics, Supabase.

Computer vision & Mechanical Engineer | Photoboiler Oy

2026 – Present

Designing and building mechanical parts for Photoboiler, a computer vision company. Creating digital solutions for the company's products and services.

Technologies: Fusion 360, 3D printing, laser cutting, CNC milling. Python, C++, C#, , Rust,JavaScript/TypeScript, HTML/CSS, TailwindCSS, React, SvelteKit, Node.js, Capacitor (Android/iOS), SEO tooling, analytics, Supabase.

Workshop Instructor | PulseIndex

2026 – Present

Instructing workshop on the use of TouchDesigner for real-time audio-visual installations.

Technologies: TouchDesigner, Resolume, MadMapper, DMX, GLSL (shader programming), Python.

Lecturer | Kristiania University of Applied Sciences

2026

Instructing workshop on the use of TouchDesigner for real-time audio-visual installations.

Technologies: TouchDesigner, Resolume, MadMapper, DMX, GLSL (shader programming), Python.

ARTS Lecturer | Aalto University

2024–2025 | Espoo, Finland

Taught the master's-level course in Generative AI. Curriculum covered diffusion model architectures, Stable Diffusion ecosystem (ComfyUI, ControlNet, AnimateDiff, SDXL), generation of images, video, audio, and 3D assets including Gaussian Splatting, and VR applications. Delivered hands-on workshops and supervised student projects.

Art Director & AI Producer | Yleisradio Oy (YLE) — Tonni Seteli AI

October 2023 – November 2024 | Helsinki, Finland

Collaboration with Kalle Eskelinen for YLE Finland. Directed and produced a series of demo videos showcasing AI-generated media capabilities using the iconic Finnish meme *Tonnin Seteli* as source material. Managed the full pipeline from concept to delivery: custom Stable Diffusion workflows, ComfyUI automation, AnimateDiff video generation, ElevenLabs synthetic voice cloning, Python scripting for batch automation. Iterated across multiple generations of tooling (from 8h/video to 30min/video as models improved).

Technologies: Stable Diffusion, ComfyUI, AnimateDiff, ElevenLabs, Python, automation scripting.

New Media Master's Programme Teaching Assistant | Aalto University

February 2023 – October 2023 | Espoo, Finland

Assisted graduate students with web technologies, generative art, AI tools, interactive media, physical computing, and advanced coding techniques within the New Media Arts programme.

Tokyo Talks — Aalto University

2023 | Espoo, Finland

Invited speaker at Tokyo Talks, a lecture and discussion series organised by the art students' association at Aalto University (Tokyo RY).

Metropolia Future Performances — Metropolia University of Applied Sciences

2023 | Helsinki, Finland

Invited speaker and presenter at the Future Performances event at Metropolia University of Applied Sciences, sharing practice and knowledge on new media, generative AI, and interactive art.

SÍM NCP Programme Artist Talk — SÍM Residency

2025 | Reykjavik, Iceland

Artist talk as part of the Nordic Culture Point (NCP) programme during the SÍM Residency in Iceland. Presented artistic practice and the Kraftlaus project to an international audience of artists, curators, and cultural professionals.

Front End Developer | Screenful Oy

December 2019 – June 2020 | Helsinki, Finland

Developed and maintained user interfaces for a business analytics and visual project management platform. Responsible for graphic and UI design of report pages and data visualisation dashboards.

Technologies: React, JavaScript, CSS, Agile/Scrum.

Full Stack Developer / Graphic Designer | ElectroWaves Oy

January 2017 – August 2019 | Espoo, Finland

Designed and implemented a streaming service web platform. Delivered graphic, UI, and embedded design for multiple software and hardware client projects. Handled automation and embedded systems engineering work alongside web development.

Technologies: Full stack web development (HTML/CSS/JS, Firebase), Graphic Design (Adobe CS), Arduino/embedded systems, AV systems (CUE, Crestron).

Graphic Designer & Technical Marketing | RoamTouch

July 2014 – October 2014 | Buenos Aires, Argentina

Supported design and development of the GestureKit webpage and associated services. Conducted testing of mobile gesture recognition applications.

Co-Founder & CEO / Graphic Designer & Developer | Softix AT

November 2012 – April 2014 | Bogotá, Colombia

Co-founded a technology startup developing ocular measurement software and web platforms. Managed design, programming, investigation, product testing and quality certification. Conducted research into ocular conditions, problems and diseases.

Art & Creative Projects

2026

The Oracle

2026 | Cable Factory, Helsinki, Finland Interactive large-scale sculpture, approx. 2 m tall, 1 m diameter

Interactive installation commissioned for Crasman's *Creative Nerd 1996–2026: From Modems to the Meme Economy*, an exhibition on thirty years of the commercial internet and digital culture in Finland. Shown at Helsinki's Cable Factory, 26 September – 17 October 2026. Produced by Crasman Oy and Merle Karp.

The piece is a freestanding device in acrylic and metal, with a holographic display at its core, sited in a black box. A visitor speaks into a microphone. An on-device model answers in spoken language, with visuals and sound. Each message is stored in the system's memory, and the machine can ask questions of its own, so what it does later depends on what people have said to it. The display shows a faceless humanoid. LEDs and sound follow the state of the system.

Speech recognition covers up to 99 languages. Speech output is limited to 10. The model stack is Qwen 3.5 4B (`qwen3.5:4b`), Whisper, and Piper, routed through a custom TouchDesigner environment. Code, schematics, and installation notes are in the Oracle repository.

Technologies: TouchDesigner, on-device LLM (Qwen 3.5 4B), Whisper, Piper, holographic display, microphone input, LED and sound response. Collaboration: Julia Zambrzycki. Voices: Aaron Geldert (EN), Kalle Eskelinen (FI), Sonja Mäkinen (FI), Alexandra Koskinen (ES). More: calvinguillot.com/the-oracle

Healing

2026 | Helsinki, Finland Ink on canvas and paper (pen plotter)

After the end of 2025, returned to the modified pen plotter and spent nine months making about twenty prints. Some are animals, some are generative abstract works, and some are portraits, made as mementos for friends and family.

Medium: Pen plotter (Ender 3 with custom adapter), generative algorithms, ink on canvas and paper. More: calvinguillot.com/healing

BarkSkin

2026 Single-channel video

Animation of a dancing human figure covered in natural fibres. The project was led by Juni Neyenhuys, in collaboration with Julia Zambrzycki. The surface is based on real fibres made from cellulose and tannin, both derived from trees, which form a naturally water-repellent material.

Technologies: Blender, TouchDesigner (custom particle projection). Collaboration: Juni Neyenhuys (lead), Julia Zambrzycki. More: calvinguillot.com/bark-skin

Dome Dreaming Festival / Takeoff

2026 | Stockholm, Sweden 360° single-channel video and performance

Invited screening of *Takeoff* at the 2026 Dome Dreaming Film Festival in Stockholm. The programme brings together international artists working between cinema, music, and immersive technology, and treats the dome as the medium.

Dome Dreaming is a non-profit fulldome film festival produced by Jonas Johansson, Fredrik Edström, and Sebastian Häger, with Aavistus, Kokong, Baltic Analog Lab, and Nordic Audiovisual Artists.

More: calvinguillot.com/dome-dreaming-festival-takeoff. Production record under Takeoff — UTM EU / Kinomural.

Kotimaan Teknokatsaus XVI

2026 | Helsinki, Finland VJ performance

Invited to perform in the 2026 edition of Kotimaan Teknokatsaus XVI, a recurring series on VJ culture and practice in Finland. Proceeds from the event are donated to charity. Music by Ana Gutieszca.

Collaboration: Ana Gutieszca (music). More: calvinguillot.com/kotimaan-teknokatsaus-xvi

2025

Rauhankone — Ekho Collective

2024–2025 | Helsinki / Oulu, Finland Interactive immersive installation | Oulu European Capital of Culture 2026

Layers in The Peace Machine is an immersive and multidisciplinary media installation entangling technology and art. Based on the literary work *Peace Machine* (*Rauhankone*) by the late Timo Honkela, the installation portrays peace as a dynamic process that shifts and evolves with the interaction of participants. The work explores how technology and collective presence can make abstract ideas — like peace — tangible and experiential.

Produced as part of the programme for **Oulu European Capital of Culture 2026** by the Finnish **Ekho Collective**: a group of artists, designers, and technology professionals specialising in immersive experiences. Members: Calvin Guillot, Essi Huotari, Vertti Luostarinen, Saara-Henriikka Mäkinen, Sini Parikka, Ilmari Pesonen, Olivia Pohjola, Iina Taijonlahti, and Timo Tikka.

Technologies: Interactive installation, immersive media systems, real-time interactive environments, sensor-based interaction.

Unframed Ticas Residency

2025 | Tartu, Estonia / Tampere, Finland AR mobile experience

Unframed: AR for Artmakers is a collaboration between Culture Cooperative TIcAS (Finland) and contemporary art platform De Structura (Estonia). Participated in the mini-residency in Tartu, Estonia, exploring how augmented reality (AR) can be used by artists to both create and present their work — highlighting the technology's potential to expand artistic practices and open new creative possibilities.

The project was a port of the Carlosverse piece into an AR mobile experience, bringing the AI-generated identity portraits into physical space via mobile devices. The exhibition was subsequently showcased in Tampere, Finland as part of **Tampere Architecture and Design Week 2025**.

Technologies: Augmented Reality (AR), mobile development, Stable Diffusion (Carlosverse model).

Consumed — Art for All Festival

2025 | Itäkeskus, Helsinki, Finland Single-channel video, 2 × 1 m

Video installation for the Art For All Festival 2025 at the Easton Hansakäytävä shopping centre, on the theme of *Success & Glory* — exploring money, consumerism, and what success means in contemporary society. The piece presents a bird's-eye view of the unstoppable growth of shopping centres around Eastern Helsinki, with simulated geometry amalgamated with real aerial photography and geospatial map data. Asks: how much more will we build before it is enough?

Many problems in our modern world can be attributed to a single root: unrestricted consumption, encouraged and fundamentally necessary for the current form of capitalism. The shopping mall is a symbol of wasteful city planning, where new venues, metro stations, and residential areas catalyse the emergence of shopping malls even adjacent to existing ones.

Technologies: 3D simulation, geospatial data visualisation, digital compositing, aerial photography integration. Photos: Konsta Klemetti and Siavash Minaravesh.

Outsider / Carlosverse — Outsider Art Festival 2025

2025 | Helsinki, Finland Single-channel video, 2 × 1 m

Digital continuation of the Carlosverse series. A 10-minute video installation featuring hundreds of AI-generated variations of "Carlos", accompanied by a synthesised voice of Carlos saying random things. Presented at the **Outsider Art Festival 2025** — an event that invites everyone to celebrate equality by giving voice to outsider artists through music, visual arts, performing arts, films, literature, and life stories. Attended by thousands of visitors. The audience was as always curious about who this mysterious yet familiar man could be.

Raises questions about identity, individuality, ownership, synthetic humans, and the definition of humanity in a world where hundreds of thousands of variations of a person's image can be effortlessly generated.

Technologies: Stable Diffusion (custom LoRA/Dreambooth model), ElevenLabs voice synthesis, video composition.

Computer Vision — Expo 2025 Osaka

2025 | Osaka, Japan Single-channel video, 25 × 8 m projection

Short film exploring the gap between embodied lived experience and its digitisation — a process increasingly shaping how humans and machines perceive reality. Showcases different aesthetics and imaginations of how computers interpret our world. Presented at the **Expo 2025 Shining Hat** Expo Hall opening screening event in Osaka, Japan — a landmark venue for Expo 2025 Osaka Kansai hosting the opening and closing ceremonies. The hall is named "Shining Hat" for its brilliant golden disk atop a sturdy cylindrical base — evoking a parabolic antenna as a symbol of sharing and receiving of information, its golden-shimmering roof reminiscent of the Tower of the Sun from Japan World Exposition Osaka 1970. The amphitheater, wrapped in textured pure white fabric, symbolises "a bright future for our lives."

Technologies: Stable Diffusion, generative visuals, 3D rendering, large-scale projection (Outer Wall surface of EXPO Hall). Collaboration: Margo Nowicka (visuals), Wild Perra (sound). Grant: Frame Contemporary Art Finland.

Kraftlaus — SÍM Residency, Reykjavik

2025 | Korpúlfsstaðir, Reykjavik, Iceland Audiovisual ALife interactive installation

Site-specific audiovisual interactive installation produced during a 2-month residency at Sambands íslenskra myndlistarmanna (SÍM) in Reykjavik. The title means "powerless" in Icelandic. The work explores the relationship between humans and glaciers — their death and rebirth, the microscopic beings trapped within them, ash falls, human dissection and analysis, and ultimately the glacier's powerlessness to resist human impact.

The installation features a large HD screen floating in the middle of a space, with a camera mounted on top tracking participant movements and gestures. Headphones deliver intimate synthesised guttural sounds. By performing certain actions, participants trigger different stories — from serene ice landscapes to fast-flashing imagery — embodying the experience of being a glacier.

Technologies: Motion tracking / computer vision (OpenCV / camera), real-time audio synthesis, TouchDesigner, interactive systems, HD display. Funded by: Nordic-Baltic Mobility Programme for Culture (Nordic Culture Point). Curated by Sunna Dagsdóttir. Directed by Martynas Petreikis.

2024

Off the Wall — Aavistus Festival

October 2024 | Helsinki, Finland Large-scale projection screening, 5 × 12 m

Audiovisual exhibition screening presented as special programming for Aavistus Festival 2024. Curated works by 10+ international new media artists exploring longer-format screened audiovisual pieces under the theme "at the points of interconnections". Managed multiple stakeholders: museum venues, artists, production company, equipment, and overall integration into the larger festival.

Roles: Curator, AV technician, director, producer. Also created the generative simulations used for the screening's visual identity.

Technologies: AV production, projection systems, generative simulations (TouchDesigner/p5.js), event management. More: aavistusoffthewall.cargo.site

Telar — Aalto University Väre

2024 | Espoo, Finland (9 months in production) Paper sculpture / installation, 12 × 20 m

Site-specific installation at the media area kitchen in Väre (Aalto University's

Art+Design+Architecture building). Long receipt paper strips hung between second-floor fencing, connecting the M and R wings. Tension on strips controlled by a noise function that determines sag — creating zones of varying density and a lowered ceiling effect to create intimacy in a previously impersonal space. Process took nine months. Collaborative project with Guus Hoeberecht.

Technologies: Computational design, Perlin noise function for physical form, parametric installation.

Helen — Electric Cabinet Street Art

2018–2026 (ongoing) | Helsinki, Finland Stencil spray paint on metal, approx. 110 × 80 cm per cabinet

Ongoing collaboration with Helen Oy (Helsinki's electric company), which invites artists to paint their electric cabinets across the city as part of a corporate social initiative. Has painted multiple boxes throughout Helsinki since 2018, exploring abstract and neoclassical art in this public medium — a code-to-paper-to-painting translation methodology. Collaborators include Monika Hauck, Margo Nowicka, Miguel García, and Kalle Eskelinen.

Real Reality — ACRE, Espoo

2024 | Espoo, Finland VR interactive experience, 3 × 8 m

Immersive VR exhibition examining what happens when our reality becomes a secondary stage. A monolithic VR headset hangs dim-lit in a dark room; entering the headset transports the visitor to the same room, well-lit and surrounded by artworks. Combines Gaussian Splatting (photorealistic 3D scene capture using probabilistic ellipsoidal distributions of colour/position/direction) with GenAI-generated art (Stable Diffusion) in real-time via TouchDesigner. Inspired by: Yulie, Olli Huttunen, Lyell Hintz, Tim Gerritsen.

Technologies: VR (Oculus), TouchDesigner (real-time pipeline), Stable Diffusion, Gaussian Splatting (Lumalabs, SuperSplat, Jawset Postshot), Python. Sound: Wild Perra.

Lala Salama Aurinko — Music Video

2024 | Helsinki, Finland

Directed and created visuals for the music video for "Aurinko sualtaa mun pään" by Helsinki rock band Lala Salama. Concept: re-imagining the band members' real travel footage through AI to evoke the instability of memory — how memories change and we become uncertain of what was real. Custom Stable Diffusion SDXL workflow in ComfyUI using ControlNet, IP Adapter, and video-to-video techniques.

Technologies: Stable Diffusion SDXL, ComfyUI, ControlNet, IP Adapter, AnimateDiff (video-to-video pipeline). (Shared public ComfyUI workflow: workflow_hsxl_sdxl.json)

Rottien Pyhimys — Greta Tuotanto

2023–2025 | Helsinki, Finland Opera multi-channel video, 3 × 12 m

Video producer and set designer for a musical theatre piece based on the novel by Anneli Kanto, composed by Jukka Nykänen and directed by Reetta Ristimäki. Together with Margo Nowicka, produced visuals showing the 16th century Church of the Holy Cross in Hattula slowly filling with its paintings in full, restored colour — fantastical ornaments growing across surfaces. Used archaeological technique combined with AI large-format image restoration to faithfully recover historical murals. Performed at Kapsakki Teatteri and Alexanderin Teatteri. Part of Aalto University's MAGICS project.

Technologies: AI image restoration (custom models), large-format super-resolution, historical data integration, TouchDesigner/compositing. Press: Helsingin Sanomat, Kulttuuri Toimitus, Kapsakki.

VJ for e30v — Entropy RY

2024 | Finland

Invited to perform at the 30th-year celebration party of Entropy RY. Live VJ set exploring real-time generative AI aesthetics within TouchDesigner.

Technologies: TouchDesigner, real-time generative AI, video mixing.

Tonni YLE — Yleisradio Oy

October 2023 – November 2024 | Helsinki, Finland (See Work Experience section for full details.)

2023

VJ for Wild Perra — Tokyo RY, Aalto University

2023 | Helsinki, Finland

Performed a VJ set in collaboration with Wild Perra (shapeshifting musician blending horror, love, and absurdism) at the annual party organized by Tokyo RY (the art students' association of Aalto University).

Technologies: Resolume/TouchDesigner, live video mixing.

Dresses — Generative Art with Pen Plotter

2023 | Helsinki, Finland Ink on paper (pen plotter), 29.7 × 42.0 cm

Series of generative art dresses produced for and plotted on a pen plotter. The work began as a commercial exercise but evolved into something personal — representing feelings at the time. Created using p5.js algorithms and plotted via a pen plotter adapted from a Creality Ender 3.

Technologies: p5.js (generative art algorithms), pen plotter (Ender 3 + custom adapter designed in Fusion 360).

Yötön Yö — Kielo Dance Company

October 2023 – November 2023 | Helsinki, Finland Ballet single-channel video performance, 8 × 5 m

Art director of video production for two small ballet/contemporary dance works by Kielo Dance Company at Tanssin Talo, celebrating the centenary of Sibelius' Sixth Symphony. Visuals explore the world of dreams across the different movements of the symphony, following the dancers. Co-created visuals with Merle Karp using real-time rendering, point clouds, generative and audio-reactive art, and sensor fusion.

Technologies: TouchDesigner, point clouds, generative art, audio reactivity, sensor fusion.

Takeoff — UTM EU / Kinomural

December 2022 – 2026 | Espoo / Tartu, Estonia / Wroclaw, Poland / Brussels, Belgium / Stockholm, Sweden 360° single-channel video and performance, 23 m dome

Art director for a multidisciplinary audiovisual production for a planetarium exhibition. A visual interpretation of a poem by Giovanni Baudonck — a meditation on dreams as escapism, the protagonist describing their first "takeoff" into limitless fantasy, rejecting the absurdity of suffering. Part of the **Urban Travel Machines (UTM)** project, a collaboration between three art schools and four planetaria across Europe, co-funded by the Creative Europe Programme of the European Union.

Presented at: Prima Vista Literary Festival (Tartu, Estonia) as an immersive slam poetry performance in a dome planetarium; ZEBRA Poetry Film Festival 2023 (cinema version); **Kinomural 2023 Open Call — Winner** (as "Lightness"), Wroclaw, Poland; the **UTM Poetry Festival in Brussels, December 2024**; and the **Dome Dreaming Film Festival, Stockholm, 2026**.

Technologies: Full-dome 360° video production, real-time rendering, 3D animation, generative visuals. Collaborators: Hanna-Katri Eskelinen, Margo Nowicka. Supported by: European Education and Culture Executive Agency (EACEA) / Creative Europe Programme of the European Union.

Sonorama R-Bus — Helsinki Art Museum (HAM)

January 2023 – September 2023 | Helsinki, Finland Audiovisual ALife interactive installation — R-Bus Project

Master's thesis project (MA New Media Arts), funded by the Helsinki Art Museum HAM. Sound and AI designer for the R-Bus installation — an autonomous driverless bus roaming the streets of Helsinki as part of Night of the Arts festival 2023.

Developed an Evolutionary Sonic Artificial Life system (*Sonorama*): urban soundscapes captured by microphones across the city are transformed into spectrograms, fed into a physarum agent-based simulation whose behaviour is controlled by a neural network guided by a NEAT genetic algorithm. The system uses IFFT to convert simulation outputs back to audio, producing a naturalistic synthetic ecosystem of sounds (whale-like, machine-like, insect-like) that evolves and adapts to live input. Implements autopoietic and sympoietic concepts. ~1,200 people experienced the installation.

Technologies: Python, Max/MSP, NEAT evolutionary algorithms, neural networks, signal processing (FFT/IFFT), physarum simulation, agent-based modelling, acoustic ecology. Collaboration: Laura Beloff (lead artist). Project: r-bus.fi.

Carlosverse — Identity Exhibition

2023 | Helsinki, Finland Multi-panel paper sheets, 4 × 12 m (ACRE) — later adapted for Outsider Festival 2025 and Unframed Ticas 2025

AI identity exploration exhibiting 600 distinct images each crafted through a synthesis of AI systems. A custom model trained on ~100 images of "Carlos" (a specific individual), then used with diffusion generation to produce thousands of variations — mundane moments to alternate human realities. Some portray everyday life; others depict alternate realities where human nature has undergone metamorphosis.

Questions identity, individuality, ownership, and the human experience in a world where synthetic humans multiply. Exhibited first at ACRE, Helsinki (print format), then evolved into a digital video installation for **Outsider Art Festival 2025** and an AR mobile experience for **Unframed Ticas 2025** (Tartu, Estonia / Tampere, Finland).

Technologies: Stable Diffusion, custom LoRA/Dreambooth model training, generative image pipeline; later: ElevenLabs (voice), AR mobile (Unframed edition).

Ihmisen Jälkeen — Finnish Chamber Opera

October 2022 – February 2023 | Helsinki, Finland Opera single-channel video, 12 × 6 m

Video production for an experimental chamber opera written and directed by Teemu Mäki, composed by Max Savikangas. The posthumanist opera explores how different intelligent forms could create life from scratch. In collaboration with Margo Nowicka and Teemu Mäki, developed a series of visual stories in which the cast were "aged" using custom-trained AI models generating interpretations of how their appearances might evolve over time — subtle, sensitive, and not confined to AI as subject matter but as creative medium.

Technologies: Custom AI ageing models (Stable Diffusion fine-tuning / face manipulation), video compositing, generative simulations. Press: Helsingin Sanomat, Kone Foundation.

2022

VJ for Tokyo — Aalto University

2022 | Helsinki, Finland

Live VJ performance at the Tokyo RY (Aalto art students' association) annual event.

Technologies: Resolume/TouchDesigner, live video mixing.

Corrugations — Origami & Paper Studies

2022 | Finland Folded paper, 28 × 21 cm

Deep exploration of origami and paper corrugation techniques through a workshop with master origamist Paul Jackson. Progressed from simple tessellations through compliant mechanisms and one-crease curvature patterns to crumpling — organic forms that follow emergent rules. Included hand-casting experimentation. This study fundamentally influenced subsequent 3D printing, sculpture, and installation work.

Techniques: Paper tessellation, origami, compliant mechanisms, curvature, crumpling, hand casting.

VJ for Rosa Jules

2022 | Helsinki, Finland

Live VJ performance for Rosa Jules' event.

Technologies: Resolume, video mixing.

Invisible Lines — Dual Projection Installation

2022 | Finland

Dual projection installation created in response to the Ukraine-Russia war (approximately 2–3 months in). Two large projections face each other: one side — serene nature imagery (waves, forest, reef) bleeding into the silhouette of a visitor, with calm soundscapes; the other — burning destruction with glitchy horror, crimson reds and blacks, sounds of underwater volcanoes and explosions. An invisible border in the middle reveals where one arrives and blurs what is left behind — an allegory for crossing the Ukraine-Poland border. Collaborative work with Margo Nowicka and Mathias Schach.

Technologies: TouchDesigner, dual projection, real-time silhouette compositing, custom soundscapes.

Explainable AI — Master's Thesis (MEng)

2022 | Aalto University & FCAI, Espoo, Finland

Master's thesis for MEng in Automation Engineering. Funded by Aalto University and FCAI (Finnish Center for AI). Published at RBCDSAI FCAI Conference on Deployable AI 2022.

Developed an interactive Human-in-the-Loop system to improve the interpretability of deep learning models. Users rated the sensibility of explanations (1–10) produced for individual image classifications by a VGG-16 network. Ratings fed back into a Bayesian Optimization loop that proposed new hyperparameters for three modules: the VGG-16 classifier, the Felzenszwalb image segmentator, and the SHAP explainer. Results showed that higher-rated explanation hyperparameters generally improved explainability without degrading classifier accuracy in the training set.

Technologies: Python, PyTorch, VGG-16 (CNN), SHAP (Explainable AI), Bayesian Optimization, Felzenszwalb segmentation, user experience research. Paper: aaltodoc.aalto.fi

Stranded Foundations — Mural, Space 21, Otaniemi

2022 | Otaniemi, Espoo, Finland

Lead artist for a ~6×3 m mural commissioned for the Space 21 building in Otaniemi. Used an iterative algorithm to generate large strands inhabiting a Perlin noise field, symbolising the constant changes and evolution inherent to the research process — Space 21 being designed for exploration and development of new ideas. Collaborative team: Monika Hauck, Katie Ballinger, Mathias Schach, Margo Nowicka, et al.

Technologies: p5.js (Perlin noise, particle/strand systems), digital-to-physical translation. Code: editor.p5js.org/calvinguillot/sketches/HwC8xDMAff

Pixel — Kinetic Origami Display

2022 | Finland

Concept and prototype for a mechanical display made of kinetic origami pixels that open and close to represent greyscale values (0–1), enabling display of greyscale images or generative art patterns. Explored screw-driven, thread-driven, and 3D-printed approaches before settling on a 3D-printed compliant mechanism module using threads to actuate the origami motif. Designed for modularity — allowing variable display sizes and shapes.

Technologies: 3D printing (FDM), compliant mechanism design, Fusion 360, Arduino (actuation control), origami engineering.

2021

Memoranda — Interactive Performance

December 2021 | Katugalleria Mutteri, Helsinki, Finland

Interactive performance at Katugalleria Mutteri. Participants entered the gallery and were invited to share personal memories; the artists (Calvin Guillot, Milja Komulainen, Lucien Montandon) reinterpreted them in real time as short audiovisual pieces. Performed 2–4 December 2021. Noted for the vulnerability and openness it elicited from participants.

Technologies: Real-time rendering, generative art, live coding, TouchDesigner.

Lamp — Reed and 3D Print Lamp

2021 | Helsinki, Finland

Custom lamp designed and fabricated using dried reed sticks woven together with jute fibre, attached to a 3D-printed PLA core. Exploration of natural materials combined with digital fabrication.

Technologies: 3D printing (PLA), Fusion 360 (core design), material: dried reed, jute fibre.

Trillium — Minimal Surface Sculpture

January 2021 – June 2021 | ACRE, Espoo, Finland Willow and jute rope, 200 × 120 × 120 cm

Large-scale parametric sculpture produced for ACRE (Aalto University). Computational simulations modelled a minimal surface using willow wood sticks, jute thread, and a metal platform. The

structure was designed to decay with time, change with seasons, and eventually break down completely — a reflection on the idea that the only constant in life is change. Inspired by natural symmetries and projective geometry. Collaborative with Faezeh Sadeghi.

Technologies: Computational simulation (minimal surface modelling), parametric design tools, physical fabrication (willow, jute, metal).

Fields — Perlin Noise Generative Art

2021 | Online / p5.js

Generative art series exploring Perlin noise fields in p5.js. Each field's colours are associated with states of feeling. A recurring aesthetic element reused across multiple later projects.

Technologies: p5.js, Perlin noise algorithm. Interactive: editor.p5js.org/calvinguillot/full/VIUTrnhkt

Before 2021

Birds — Boids Simulation

Pre-2021 | p5.js

Interactive p5.js simulation of emergent flocking behaviour using Craig Reynolds' Boids algorithm (Separation, Alignment, Cohesion). Implemented a quadTree data structure for spatial optimisation and custom colour palettes. Users can adjust sliders to modify behaviour and save still images of their flock.

Technologies: p5.js, quadTree, particle simulation. Interactive: editor.p5js.org/calvinguillot/full/_YGNrlxP-

Math — Generative Art Explorations

Pre-2021 | Various

A collection of mathematical and generative art explorations using p5.js and WebGL — experimenting with noise, geometry, simulation, and mathematical visualisation.

Paintings — Traditional & Street Art

Ongoing

Traditional painting practice alongside street art and mural work. Code-to-paper-to-painting

translation methodology used in multiple public commissions.

Software & Technical Projects

jobparser-llm — AI CV & Cover Letter Generator

2025–2026 | Python, Flask, Ollama, LLM

A local web application for generating targeted CVs and cover letters for job applications. Powered by a locally running Ollama LLM (Gemma 3:4b). The user chats with the AI to provide company name, description, and job description; the backend reads `extended_cv.md`, generates tailored CV and cover letter HTML via the LLM, which can be edited in a rich-text canvas and exported as PDF via WeasyPrint.

Stack: Python (Flask), Ollama (local LLM), WeasyPrint (PDF), JavaScript (frontend canvas), streaming HTTP responses.

tracker — Daily Life Tracking App

2025 | SvelteKit, Supabase, Capacitor

Full-stack daily tracking application with a rich data visualisation dashboard. Features: mood/energy/physical/sleep/meals/weight line charts, activity distribution charts, annual activity heatmap, date-range filtering, toggleable columns, desktop tooltips. Deployed to GitHub Pages; packaged as a native Android app via Capacitor.

Stack: SvelteKit 5, TypeScript, Supabase (PostgreSQL), TailwindCSS, Capacitor (Android), GitHub Pages, Recharts/D3.

hsl-live — Helsinki Transit Live App

2025 | SvelteKit, TypeScript

SvelteKit web application for visualising or interacting with live Helsinki public transit (HSL) data.

Stack: SvelteKit 5, TypeScript, TailwindCSS, HSL open data API.

hypersolids — Geometric Visualisation Tool

2025 | SvelteKit, TypeScript, WebGL/GLSL

SvelteKit-based tool for interactive 3D/4D geometric visualisation (hypersolids, polytopes).

Stack: SvelteKit 5, TypeScript, WebGL/GLSL.

image-to-webp-converter — GUI Batch Converter

2024 | Python, Tkinter

Desktop GUI application for batch image-to-WebP conversion. Features a graphical interface (Tkinter/GUI), configuration system, CLI fallback, and packaging setup.

Stack: Python, Tkinter, Pillow, setuptools.

ig-foll — Instagram Analytics Tool

2024 | Python

Python tool for tracking and analysing Instagram follower data.

Stack: Python, Instagram unofficial API.

Fal API — AI Video Generation Scripts

2024–2025 | JavaScript, Node.js, Fal.ai

JavaScript automation scripts for generating AI video and image content via the fal.ai API. Includes automated workflows for Wan2.2 video generation model and batch processing pipelines.

Stack: Node.js, JavaScript, fal.ai API (Wan2.2), automation scripting.

All-In-One-Deflicker — Neural Video Deflickering

2023–2024 | Python, PyTorch

Implementation and adaptation of the CVPR 2023 paper "*Blind Video Deflickering by Neural Filtering with a Flawed Atlas*" (Lei et al., CVPR 2023). Used for post-processing AI-generated video content to remove temporal flickering artifacts from Stable Diffusion video generation outputs.

Stack: Python, PyTorch, CUDA, neural atlas-based video filtering.

GLSL Shader Development

2024–2025 | GLSL, TouchDesigner

Ongoing development of custom GLSL fragment shaders (cursor_glsl_test_1.frag) and TouchDesigner patches (star_field_t_cur_1.toe) for real-time audiovisual work and VJ performance.

Stack: GLSL, TouchDesigner.

Photogrammetry Pipeline

2022–2024 | Python, Gaussian Splatting tools

Photogrammetry and 3D reconstruction pipeline development supporting the Real Reality VR project and other immersive work. Includes tools for point cloud generation, mesh processing, and integration with Gaussian Splatting workflows.

Stack: Python, Lumalabs, SuperSplat, Jawset Postshot, MeshLab.

3D Design & Fabrication

Hardware: **Creality Ender 3 E3V2** FDM 3D printer with custom modifications. Software: **Fusion 360**, **Blender**, **Cura** (slicer).

Notable designed and printed objects:

- **Pen Plotter Adapter** — Custom Ender 3 adapter and holder for converting the printer into a pen plotter (used for the *Dresses* generative art project)
- **Kinetic Origami Pixel Display** — Modular 3D-printed compliant mechanism pixels (*Pixel* project)
- *Custom Keyboard Chassis (KC_)** — Multiple iterations of a keyboard enclosure design
- **Synth Holders** — Hardware holders for synthesizer modules
- **Ihana Bathroom Accessories** — Custom-designed quartz holder and bathroom fixtures
- **PS5 Vertical Stand** — Custom vertical stand for PlayStation 5
- **Maskerade Mask** — Mask design for performance/festival use
- **Custom Chess Set** — Chess piece designs (pawns, kings, etc.)
- **Lamp Cable Component** — Replacement/custom lamp cable holders
- **Functional Hardware** — Door clips, holders, spacers, reducers, hangers
- Various art and exhibition hardware supports and fixtures

Grants & Residencies

- **2025:** Frame Contemporary Art Finland — Computer Vision at Expo 2025 Osaka, Japan
- **2025:** Nordic Culture Point / Nordic-Baltic Mobility Programme — SÍM Artist Residency, Reykjavik, Iceland
- **2025:** Unframed Residency — Tartu, Estonia / Tampere, Finland (Unframed: AR for Artmakers, TIcAS & De Structura)
- **2023–2024:** Aalto University MAGICS Project — Rottien Pyhimys, Ihmisen Jälkeen
- **2023:** Helsinki Art Museum (HAM) — Sonorama R-Bus / R-Bus Project
- **2022:** FCAI / RBCDSAI — Explainable AI research (Master's thesis, Aalto University & Finnish Center for AI)
- **2022–2024:** European Education and Culture Executive Agency (EACEA) / Creative Europe Programme — Urban Travel Machines / Takeoff

Awards & Recognition

- **Kinomural 2023 Open Call — Winner** (*Takeoff* / "Lightness") — Kinomural, Tartu, Estonia
- **RBCDSAI FCAI Conference on Deployable AI 2022 — Paper Presentation** (*Explainable AI* master's thesis)

Languages

- **Spanish** — Native / Mother tongue
- **English** — Native level; formal writing and professional communication
- **Finnish** — Intermediate; conversation, listening, reading
- **Portuguese** — Basic; conversation and listening

Interests & Attributes

Art, robots, coding, music, architecture, philosophy, bouldering, windsurfing. Organised, creative, efficiency-driven, eager to solve problems, sociable and easy-going. Believes that the context is the most fundamental part of any art piece; governed by a process of discovery, experimentation, and play rather than a fixed style. Passionate about emergent behaviours, natural processes, human connection, and social conflict as artistic material.