Garin Curtis

⚲ London ✉ garincurtis@gmail.com ☎ 07748655773 🔗 garincurtis.com ⚙ Gcurtis95

About me

I'm a machine learning engineer and creative technologist with hands-on experience in real-time systems, generative audio-visual media, and interactive installations. I specialise in developing innovative ML pipelines using PyTorch and Python, with a strong foundation in both software engineering and model experimentation. My work spans production-ready tools for artistic projects, academic research, and immersive technology. I excel in collaborative, cross-disciplinary teams and bring excellent problem-solving skills with a practical, solution-oriented mindset.

Technical Skills

Languages: Python, JavaScript, C++, C#, GLSL, HTML, CSS

ML & AI Frameworks: PyTorch, HuggingFace, Transformers, OpenCV, scikit-learn, NumPy, Label Studio, Ircams's RAVE.

Generative Systems: Diffusion models (Stable Diffusion, DreamBooth), ComfyUI, Kohya SS, VAEs, GANs, NeRFs.

Interactive Tools: GPGPU compute (Three.js, WebGL, GLSL), TouchDesigner, Pure Data, Max/MSP, Unity and Unreal engine 5.

Web & Frontend: React, Next.js, Three.js, GSAP, Framer Motion, Lenis, WebSockets, FastAPI, Vercel.

Tools & DevOps: Git, Docker, Runpod, MLflow, OSC, REST APIs.

Experience

University for the Creative Arts   *May 2025 - Present*
Freelance AI Engineer

- Fine-tuned LoRA models for Stable Diffusion to expose and subvert representational biases in a generative AI project that reimagines the portrayal of women in advertising. Developed a serverless web application using RunPod, with an an accessible front-end interface that enabled the client to experiment with trained LoRA models creatively.
- Tools used: Python, PyTorch, Label Studio, Kohya SS, ComfyUI, Runpod.

Installation at CVPR 2025 AI Art Gallery   *May - June 2025*
Fullstack AI Engineer

- Designed and deployed a real-time interactive control system for AI-driven image generation on a cloud GPU backend using Docker, integrating FastAPI, WebSockets, and OSC to dynamically control a diffusion model with XY spatial input via machine learned parameter mapping and an interactive map selecting different layers. The installation uses network bending techniques which modify and manipulate the computational graph of a generative model.
- Tools used: Python, PyTorch, FastAPI, Websockets, sklearn, Javascript, Runpod, Docker, Html, and CSS.

Installation at London Tech Week 2025   *May - June 2025*
AI Engineer

- Exhibited an interactive digital artwork at London Tech Week 2025, integrating real-time body tracking data that disrupt the internal mechanisms of a diffusion model, making the inner workings of AI visible, responsive, and beautifully unpredictable.
- Tools used: Python, PyTorch, Touchdesigner.

Portfolio Website   *April - May 2025*
Creative Frontend Developer

- Built an interactive portfolio website using Next.js, Three.js, and GLSL, integrating advanced GPGPU compute shaders for real-time particle systems and visual effects. Implemented smooth scroll and transitions

with GSAP, Framer Motion, and Lenis, optimising performance for GPU-intensive rendering and cross-device compatibility.
- Tools used: Next.js, React, Javascript, GSAP, Framer Motion, Vercel, Html, CSS

Ancestral (R)evocations - Erika Tan - Featured at Tate Modern *July 2024 – October 2024*
Freelance Software Engineer
- Designed and implemented a real-time interactive audio system using Ircam's RAVE model trained on a custom dataset recorded at the Tate Modern, integrating generative ML, metadata mapping, and granular synthesis to help artist Erika Tan to realise her semantic sound data sonification installation in the Tate Modern Tanks
- Tools used: Python, PyTorch, Pure Data, and OSC.

BNP Paribas *Bristol*
Funding Manager *July 2021 – July 2023*
- Worked in a fast-paced environment, delivering accurate, detail-oriented work while adapting quickly to new tools and collaborating effectively across operations, sales, and support teams.

HSBC *Bristol*
Financial Administrator *Oct 2018 – April 2021*
- Handled sensitive financial data with precision and accountability, independently resolving complex cases under pressure while ensuring clear communication, accurate documentation, and rapid adaptation to new systems and procedures.

DAMEFRISOR *Bristol*
Writer, Guitarist *Dec 2018 – August 2024*
- I was one of the key songwriters and producer in the band DAMEFRISØR. During the band's career our music has been playlisted on BBC Radio 6 Music; having been championed by presenter Steve Lamacq as well as receiving plaudits from press outlets such as DIY Magazine, Dork and Clash to name a few.

Education

University of the Arts London - Creative Computing Institute *Sept 2023 – Dec 2024*
MSc Creative Computing (1st)
- Focus: Machine learning for creative systems, real-time audio/visual interaction, generative AI, neural rendering.

University of Cardiff *Sept 2014 – June 2018*
BEng Mechanical Engineering (2:1)

Masters Dissertation

Novel Interface for Real-Time Control of Diffusion Models
- Built an expressive real-time interface for manipulating diffusion model outputs (image generation) beyond text prompts.
- Implemented novel interactive techniques for manipulating the computational graph during inference and trained fine-tuned models using Dreambooth. Supervised by Phoenix Perry.
- Tools used: Python, PyTorch, Touchdesigner, OSC.

References available upon request