

Kai Christensen

Machine Learning Researcher
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Hi, I'm Kai. I am interested in neural implicit representations, parameter-/compute-/data-efficient learning, and novel/unusual neural network architectures. I would love to learn more about robotics and reinforcement learning, among other topics. I want to work on something that matters and makes the world a better place.

Work History

- **Cedars-Sinai Medical Center.** *Machine learning research. (2021/10 to Present)*
Wrangled very large medical image datasets. Trained dozens of deep neural networks. Worked with clinicians to design experiments and publish papers. Built and maintained custom on-prem Linux GPU servers and a 300TB TrueNAS storage server.
- **Trailfort.** *Product visualization. (2019)*
Created 3D product visualizations and promotional animations using the software Blender.

Selected Papers

- ***Vision-language foundation model for echocardiogram interpretation***
First author. [Published](#) in Nature Medicine in 2024.
- ***Deep learning based electrocardiographic screening for chronic kidney disease***
Co-first author. [Published](#) in Communications Medicine in 2022.

Skills

- **Machine learning.** PyTorch, Numpy, Pandas, WandB, Matplotlib.
- **Blender.** Modeling, shading, tracking, compositing, Python API.
- **The arts.** [Music](#), portraiture, [filmmaking](#) (including VFX), and [creative writing](#).
- **PR.** >100k followers [on TikTok](#).
- **Linux.** Ubuntu, Docker.

Other Projects

- [Painterbot](#). *Artistic algorithmic image reconstruction with PyTorch. (2023/10)*
- [Spectracles](#). *Complex-valued pixel-level image transformer that replaces standard attention with the FFT. Promising performance at small parameter counts, but I unfortunately could never get it to scale properly to larger model sizes.*
- [100 Days of Chalk Art](#). *Long-term public performance art. (2020/03 - 2020/07)*
- [No More Greenscreen](#). *Deep video matting paper reproduction. (2021/01 - 2021/10)*
My first real ML project. I didn't succeed, but I won the [Pioneer tournament](#) working on it.

Education

I graduated from Lincoln High School in 2020 and chose not to attend college. All skills listed in this resume are self-taught. I really like to learn new skills.