

PHILOSOPHY, SOFTWARE

DEEP FAKE IMAGE FRAUD

14.06.2022

Doing now another image integrity study, I fear that we may already have the deep fake images in current scientific papers. Never spotted any in the wild which doesn't mean that it does not exist...

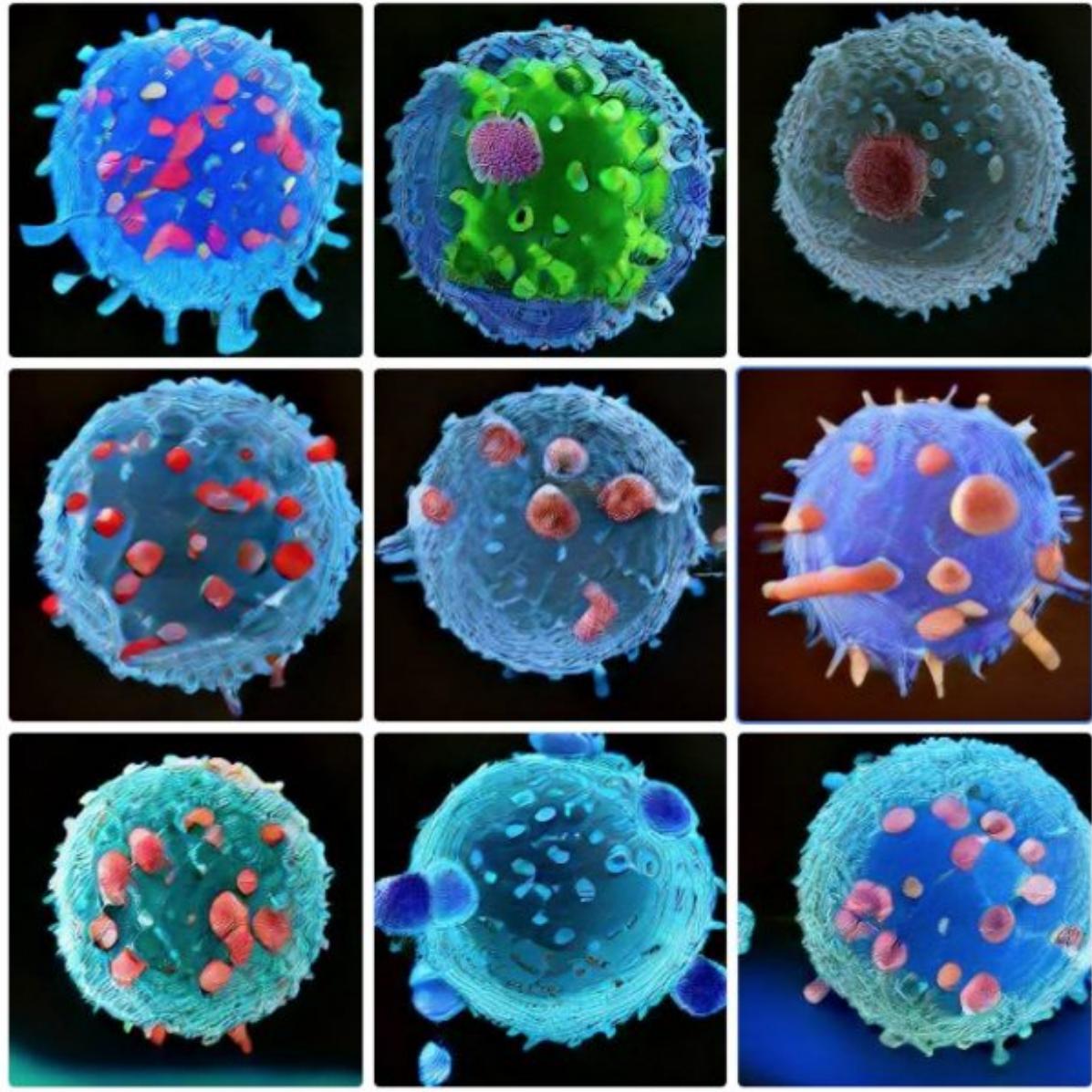
Here are some T cells that I produced this morning.

DALL·E mini

DALL·E mini is an AI model that generates images from any prompt you give!

T cell

Run

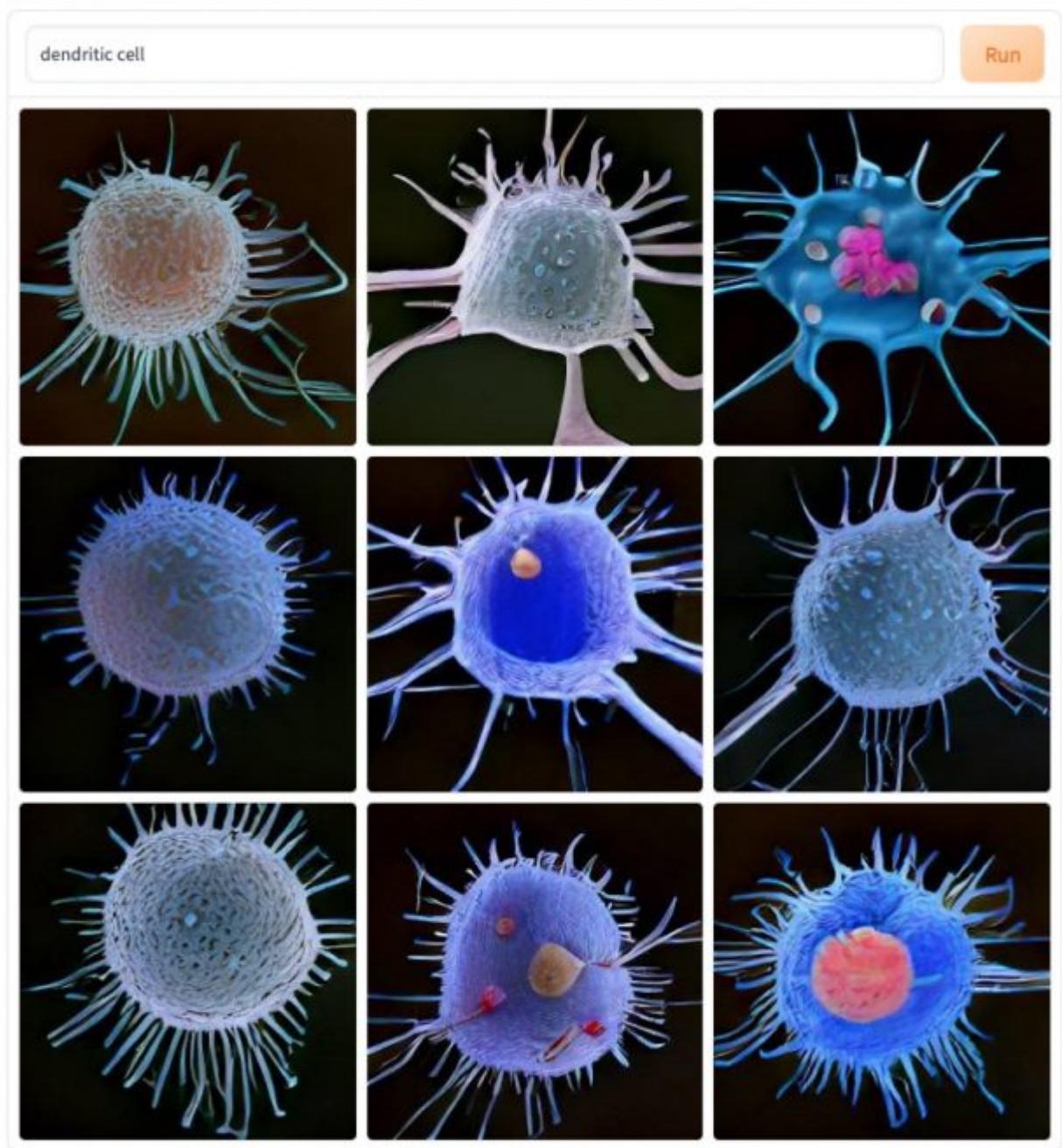


▼ Bias and Limitations

While the capabilities of image generation models are impressive, they may also reinforce or exacerbate societal biases. While the extent and nature of the biases of the DALL·E mini model have yet to be fully documented, given the fact that the model was trained on unfiltered data from the Internet, it may generate images that contain stereotypes against minority groups. Work to analyze the nature and extent of these limitations is ongoing, and will be documented in more detail in the [DALL·E mini model card](#).

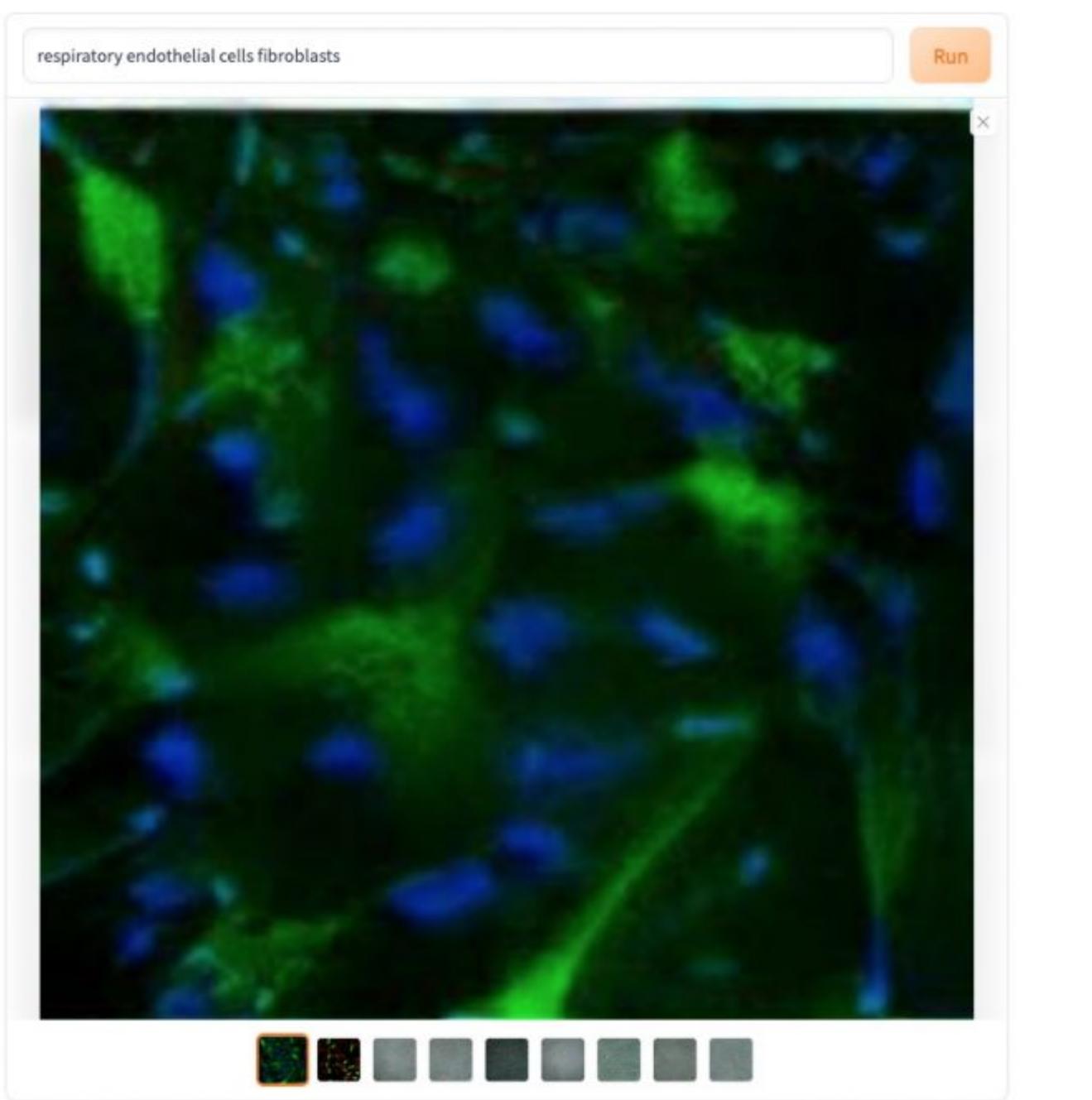
<https://huggingface.co/spaces/dalle-mini/dalle-mini>

... some deep fake dendritic cells ...



<https://huggingface.co/spaces/dalle-mini/dalle-mini>

... and some respiratory epithelium ...



My current strategy is to use [impainting detection](#) along with some [GAN detectors](#) while I would welcome recommendations how to detect these fakes...

The size of the problem has also been highlighted by [a recent paper](#)

There is an increasing risk of people using advanced artificial intelligence, particularly the generative adversarial network (GAN), for scientific image manipulation for the purpose of publications. We demonstrated this possibility by using GAN to fabricate several different types of biomedical images and discuss possible ways for the detection and prevention of such scientific misconducts in research communities.

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