Riffusion is a neural network , designed by Seth Forsgren and Hayk Martiros, that generates music using images of sound rather than audio. [1]

The resulting music has been described as " de otro mundo " (otherworldly), [2] although unlikely to replace man-made music. [2] The model was made available on December 15, 2022, with the code also freely available on GitHub . [3]

The first version of Riffusion was created as a fine-tuning of Stable Diffusion , an existing open-source model for generating images from text prompts, on spectrograms , [1] resulting in a model which used text prompts to generate image files which could then be put through an inverse Fourier transform and converted into audio files. [3] While these files were only several seconds long, the model could also use latent space between outputs to interpolate different files together [1] [4] (using the img2img capabilities of SD). [5] It was one of many models derived from Stable Diffusion. [5]

In December 2022, Mubert [6] similarly used Stable Diffusion to turn descriptive text into music loops. In January 2023, Google published a paper on their own text-to-music generator called MusicLM. [7] [8]

Forsgren and Martiros formed a startup, also called Riffusion, and raised $4 million in venture capital funding in October 2023. [9] [10]

References

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Boomplay

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Gemini (language model)

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Kunihiko Fukushima

Takeo Kanade

Marvin Minsky

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Nathaniel Rochester

Allen Newell

Cliff Shaw

Herbert A. Simon

Oliver Selfridge

Frank Rosenblatt

Bernard Widrow

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Seymour Papert

Seppo Linnainmaa

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Aidan Gomez

John Schulman

Mustafa Suleyman

Jan Leike

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Vision transformer (ViT)

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