R.A.C.K. Neural Audio Inverter

Extreme AI Music — Outside LLMs

The Team

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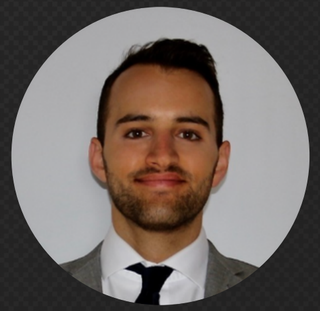

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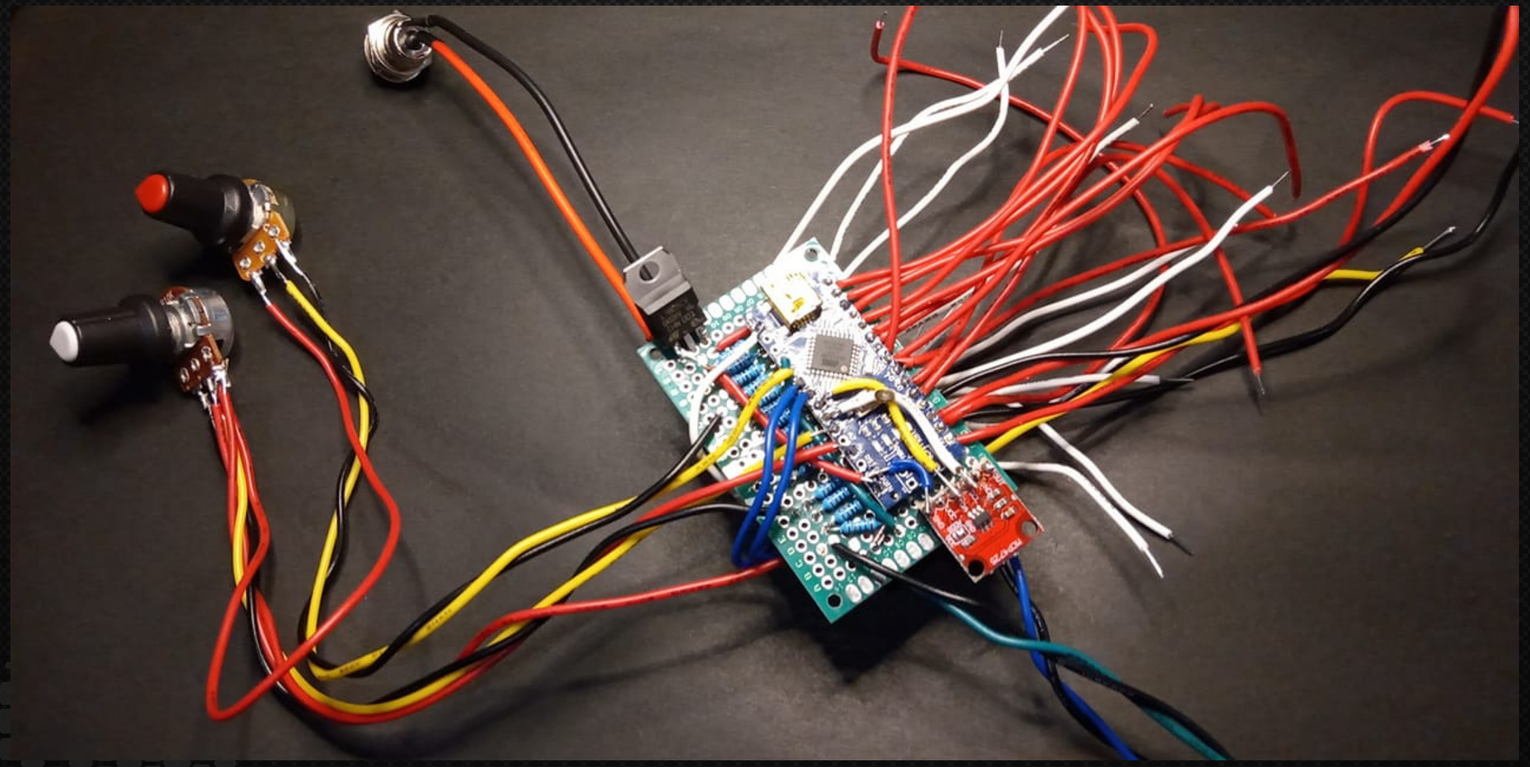
LINKEDIN:
CHRISTOS-MAGGANAS

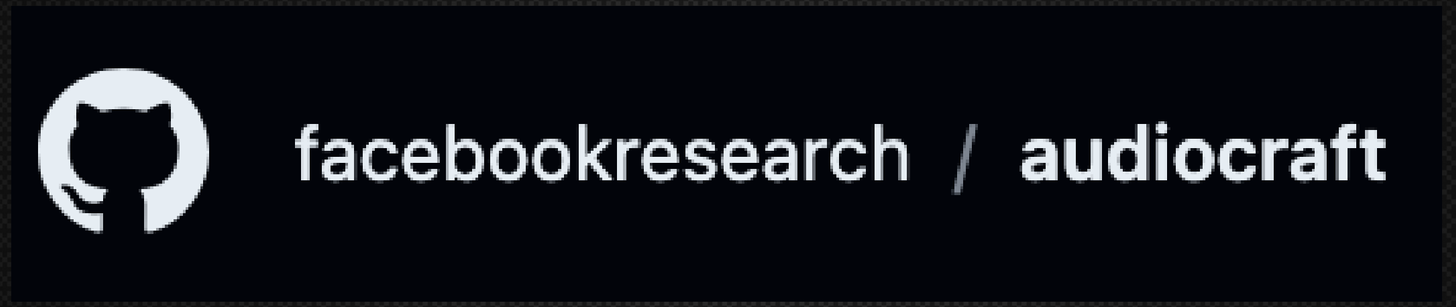
Kajari GHOSH

SOFTWARE ENGINEER

LINKEDIN:
KAJARIGHOSH

Neural Circuit Bending





Models

At the moment, AudioCraft contains the training code and inference code for:

- MusicGen: A state-of-the-art controllable text-to-music model.
- AudioGen: A state-of-the-art text-to-sound model.
- EnCodec: A state-of-the-art high fidelity neural audio codec.
- Multi Band Diffusion: An EnCodec compatible decoder using diffusion.

facebookresearch / audiocraft

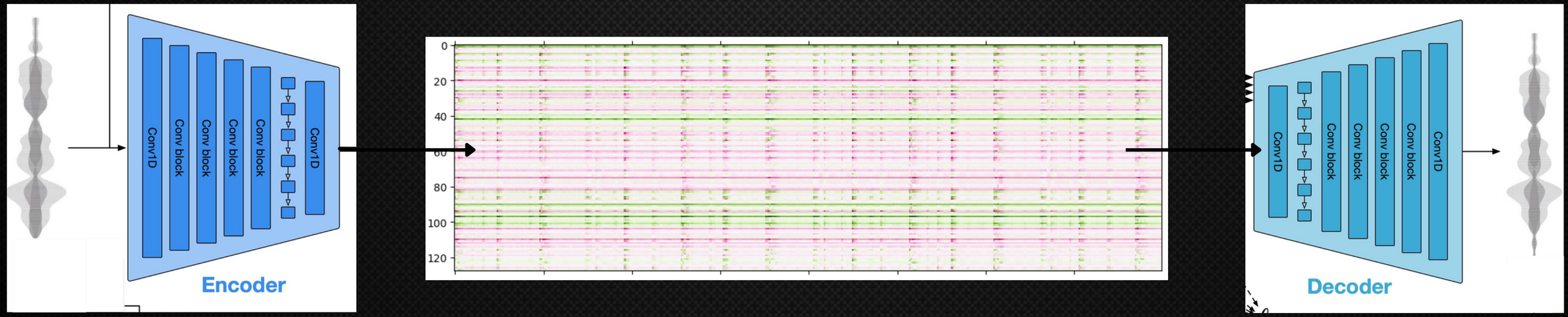
Models

At the moment, AudioCraft contains the training code and inference code for:

My music is weird, I don't know how to describe it with text :/

- EnCodec: A state-of-the-art high fidelity neural audio codec.

EnCodec

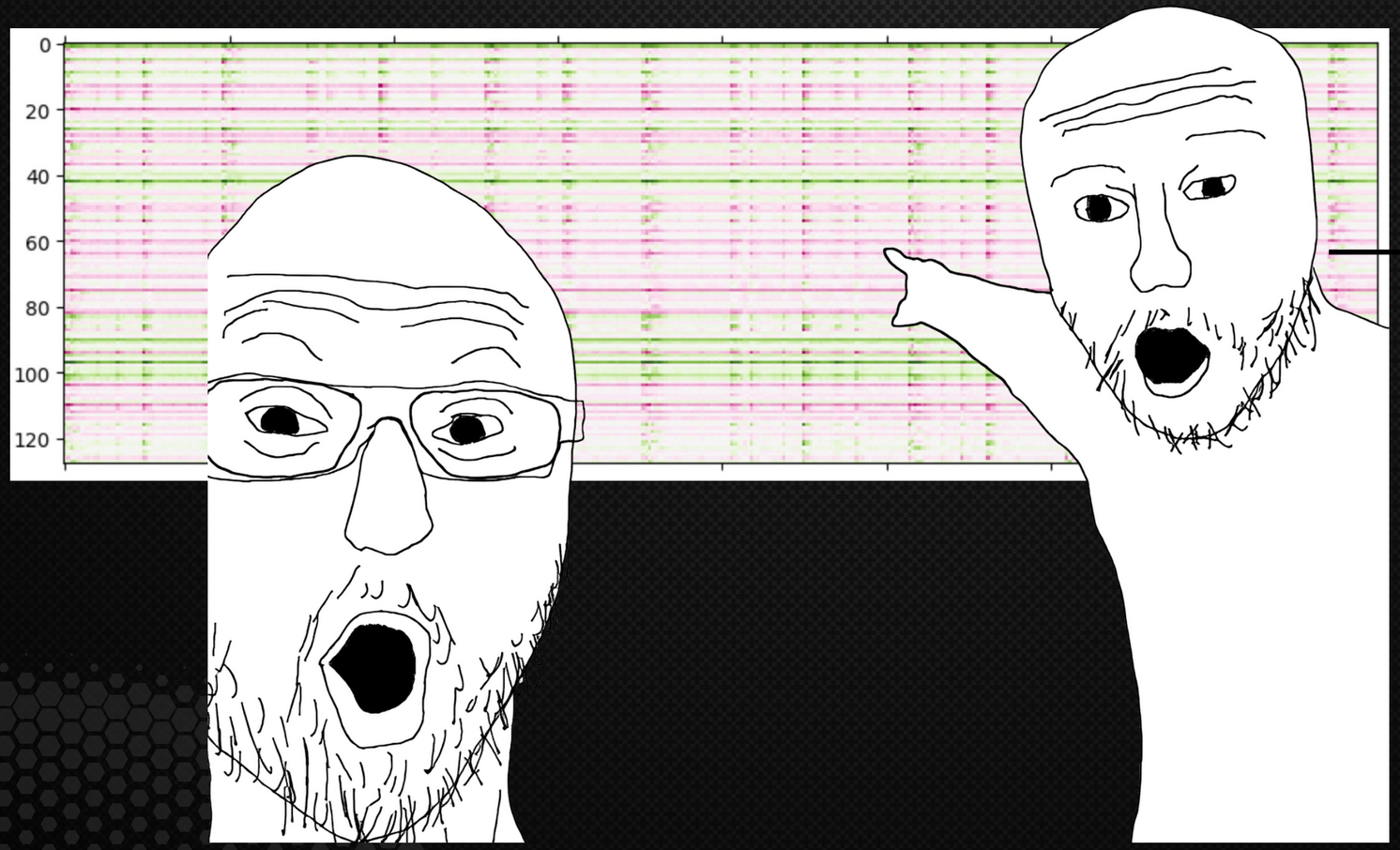


Not pictured:

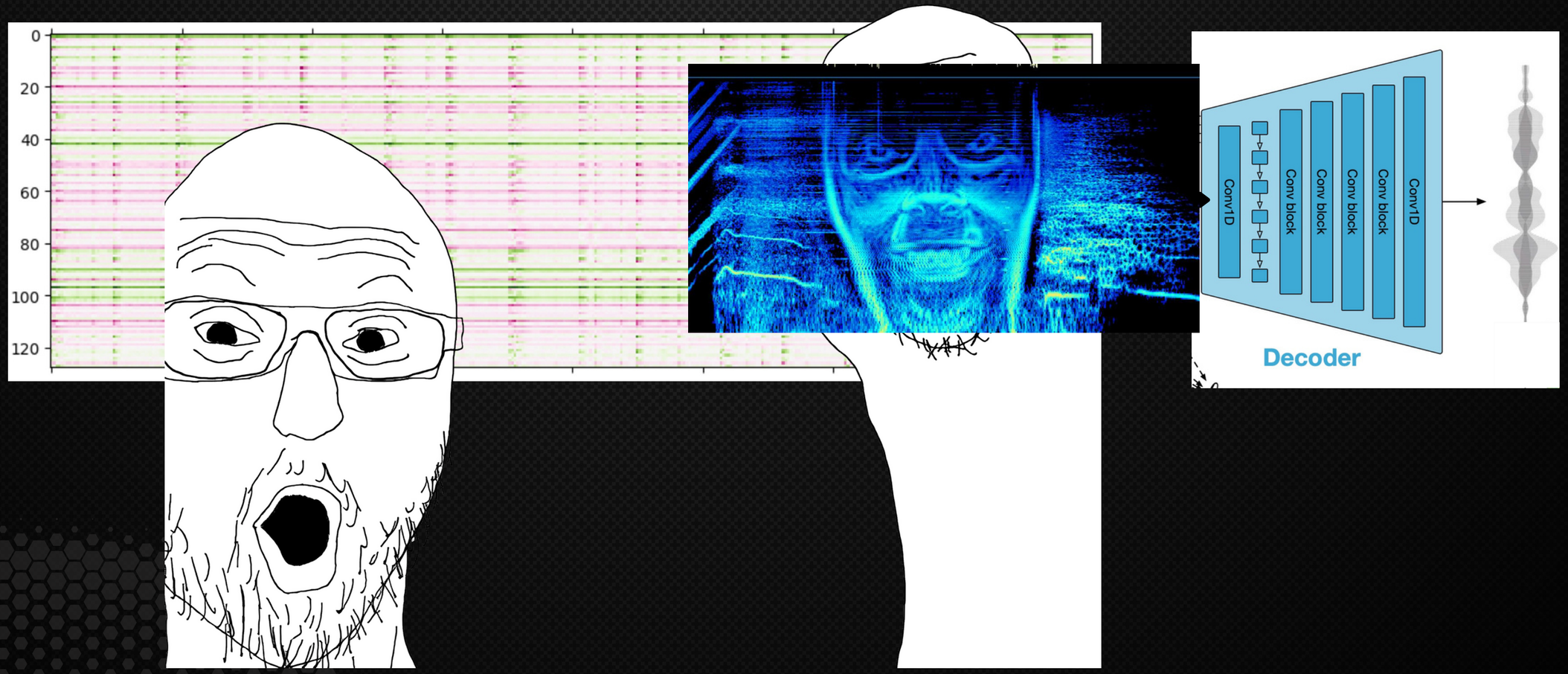
- Quantizer
- Discriminator & training

Défossez et al. 2022, "High Fidelity Neural Audio Compression"

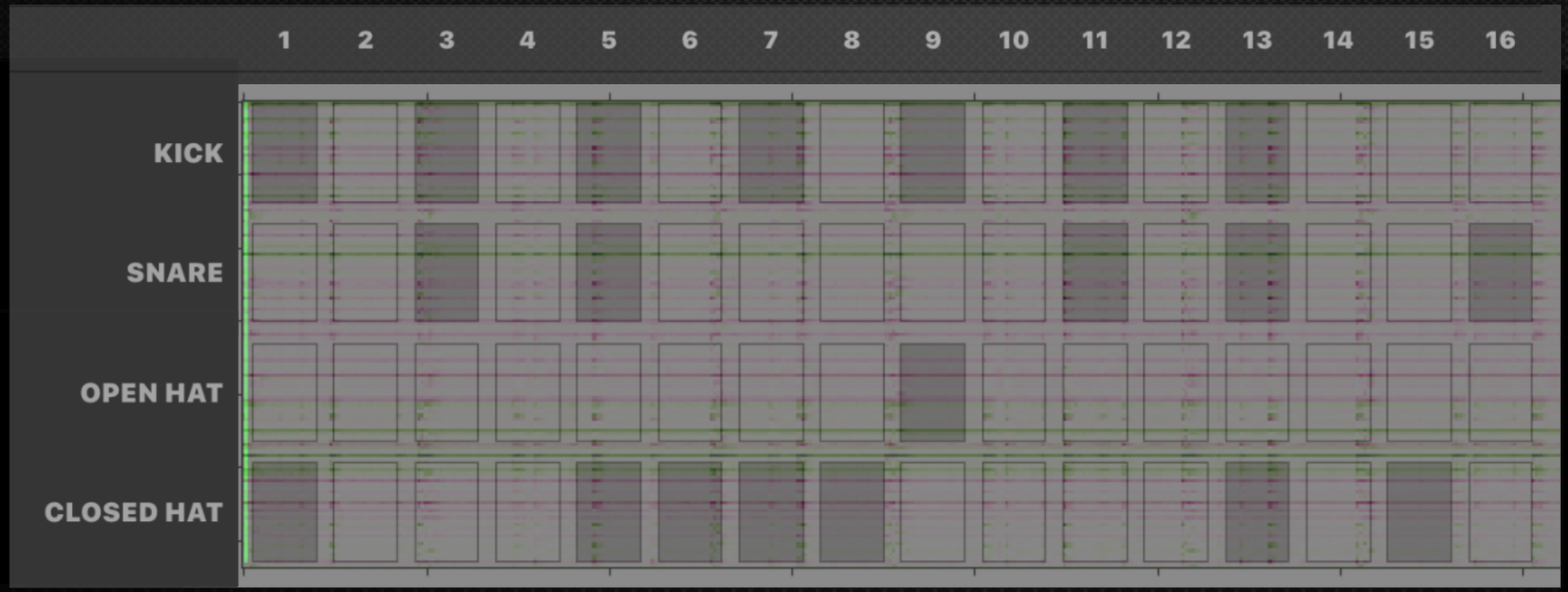
EnCodec Latents!



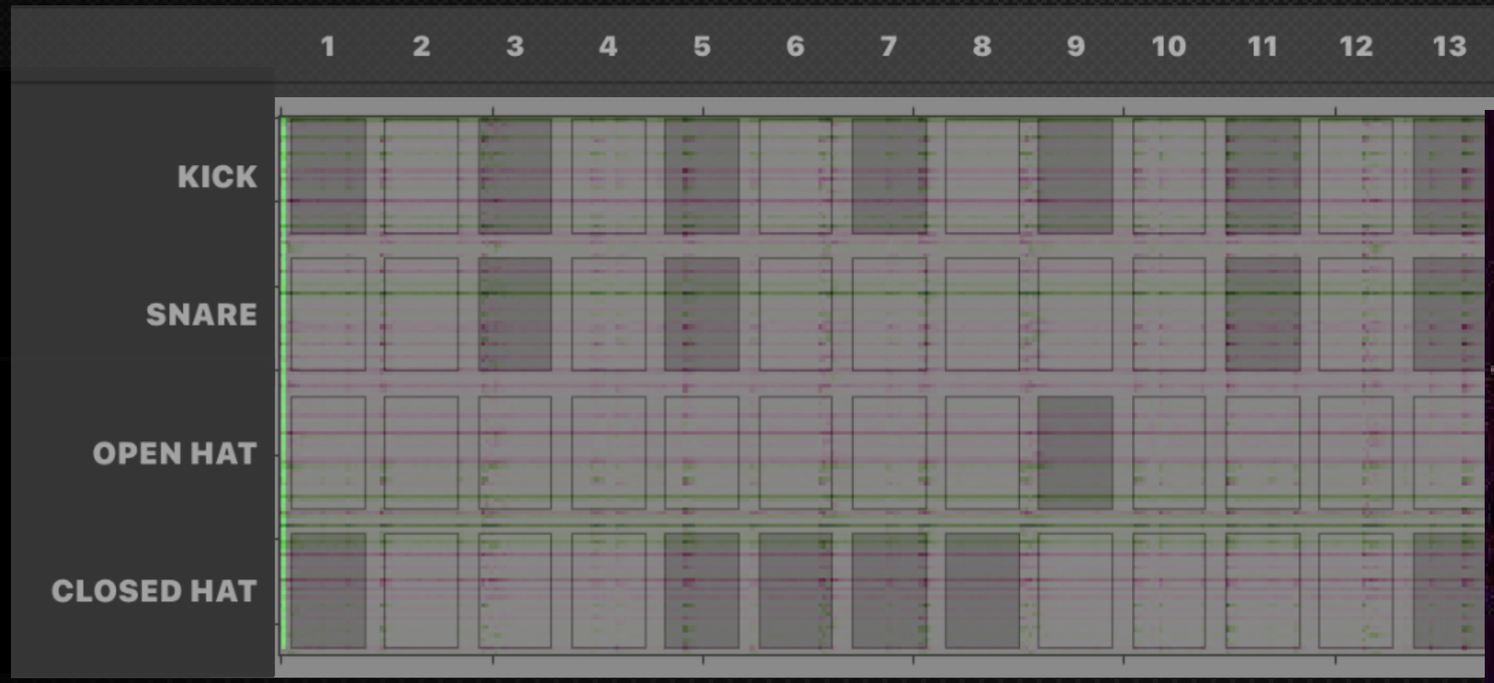
EnCodec Latents!



EnCodec Drum Machine?

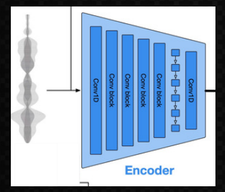


EnCodec Drum Machine :(

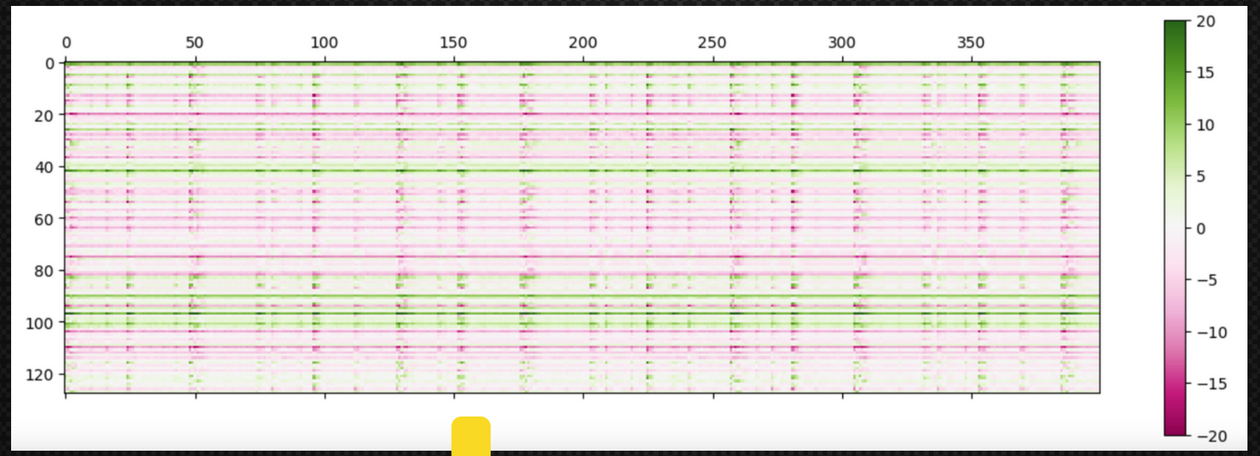


Neural Audio Inverter

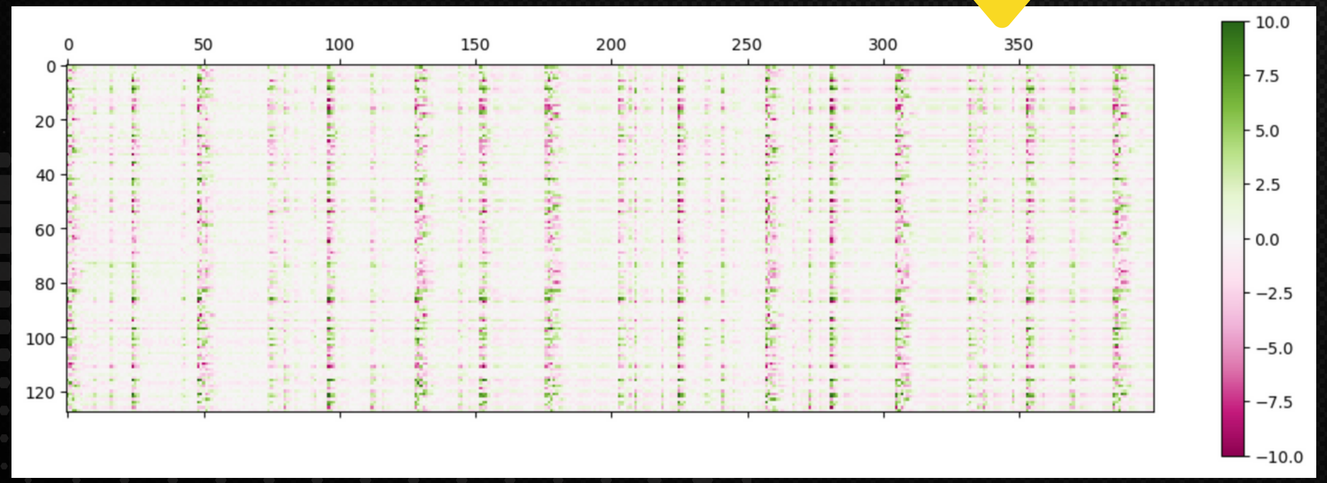
Input track



Encoder

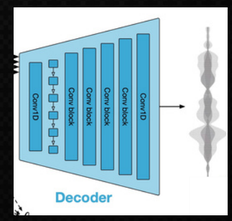


Normalization



Invert
& time flip

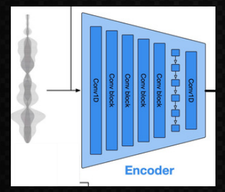
Output Remix



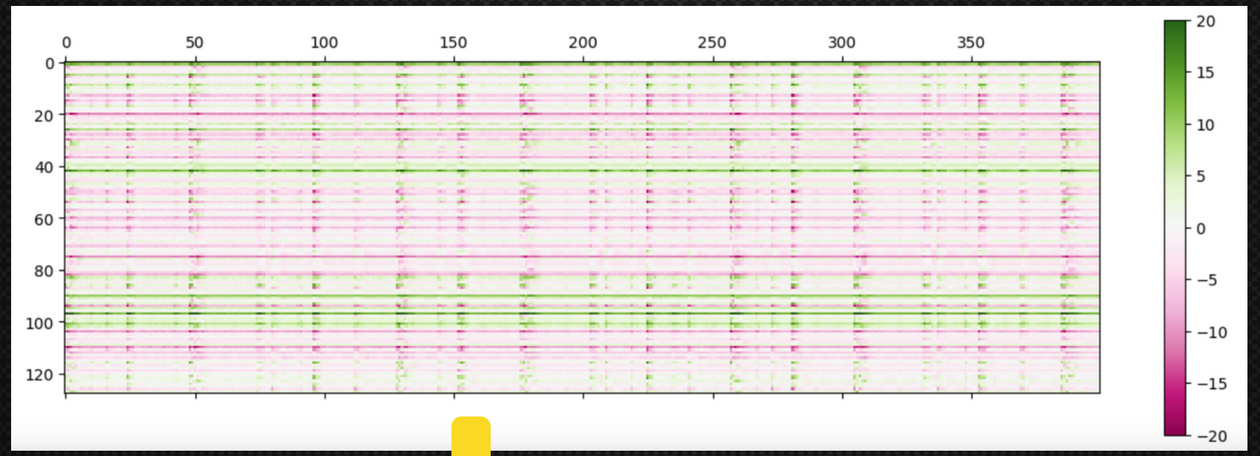
Decoder

Neural Audio Inverter

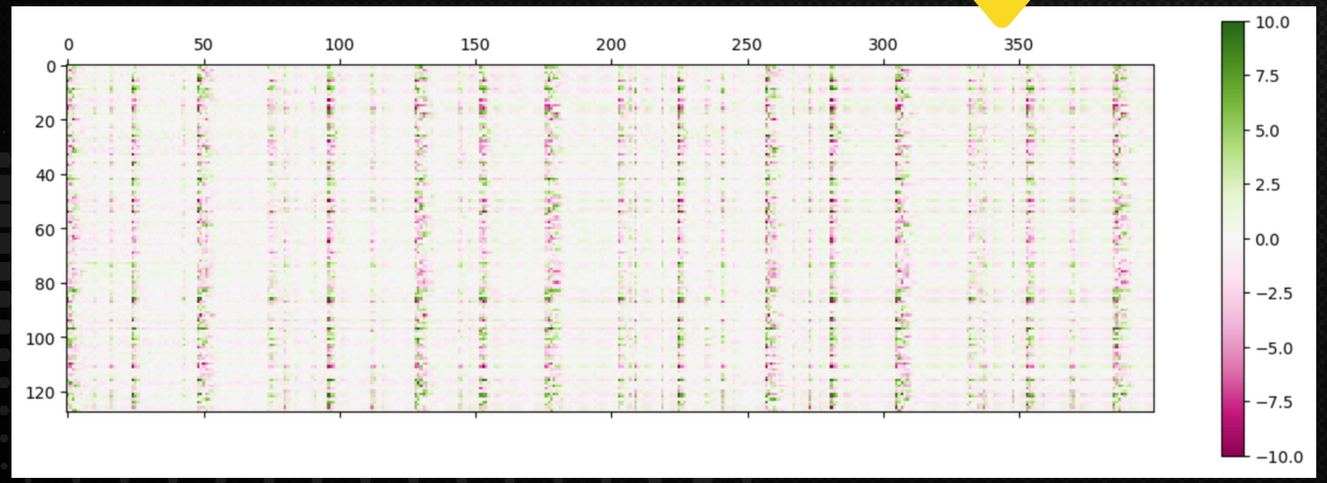
Input track



Encoder



Normalization



Invert
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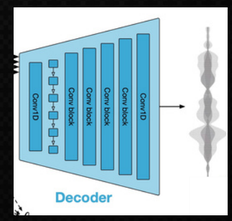
Output Remix



Decoder

Demo

http://34.86.80.211:3000

Code: https://github.com/Romainpaulus/RKA-808

Future work

- Fine-tune EnCodec for latents manipulation
  - dropout/noisy training
  - effects side-inputs (pitch-shift, filter, etc)

- Neural audio plugin for DJs/music producers

Thank You

@OUTSIDELLM