

Music generation

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Objectifs

Générer de la musique.

Dataset: Un ensemble de partition sous forme de fichiers MIDI.

Sortie Un fichier MIDI.

Midinet

- ▶ *MidiNet: A Convolutional Generative Adversarial Network for Symbolic-domain Music Generation*
by Li-Chia Yang, Szu-Yu Chou, Yi-Hsuan Yang in 2017.
- ▶ Uses CNN for the generator instead of RNN;
- ▶ Can be used to follow a melody or produce multitrack melody.

Architecture

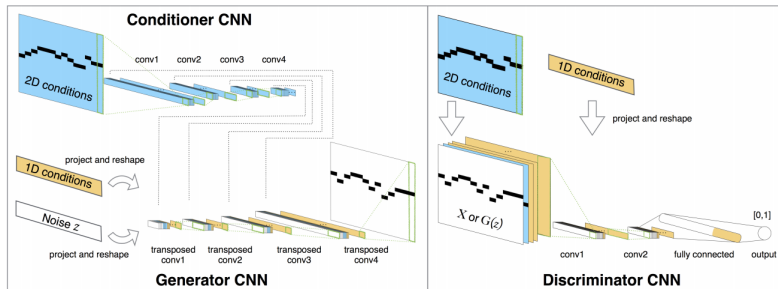


Figure: The architecture of the MidiNet Network

Results

- ▶ The conditioner helps prevent mode collapse.
- ▶ ...

A Hierarchical Latent Vector Model for Learning Long-Term Structure in Music by Adam Roberts, Jesse Engel, Colin Raffel, Curtis Hawthorne, Douglas Eck

- ▶ Based on a variational autoencoder.
- ▶ Uses a hierarchical structure to have some long-term consistency.

Architecture

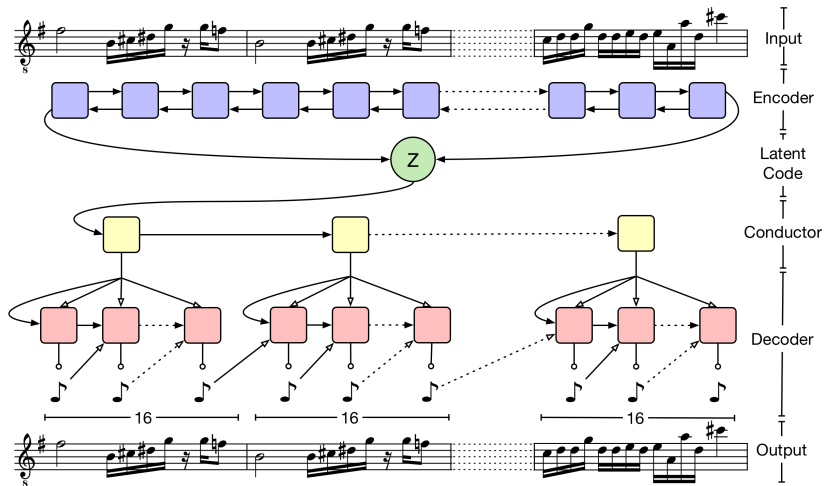


Figure: The architecture of the MusicVAE model

Résultats

- ▶ The hierarchical structure promotes the use of the latent code.
- ▶ ? Can't generate music out of nothing...
- ▶ ...but can be used to interpolate between two melody.
- ▶ ...