[G08] https://github.com/Sma1033/drum_generation_with_ssm/

GENERATING STRUCTURED DRUM PATTERN USING VARIATIONAL AUTOENCODER AND SELF-SIMILARITY MATRIX

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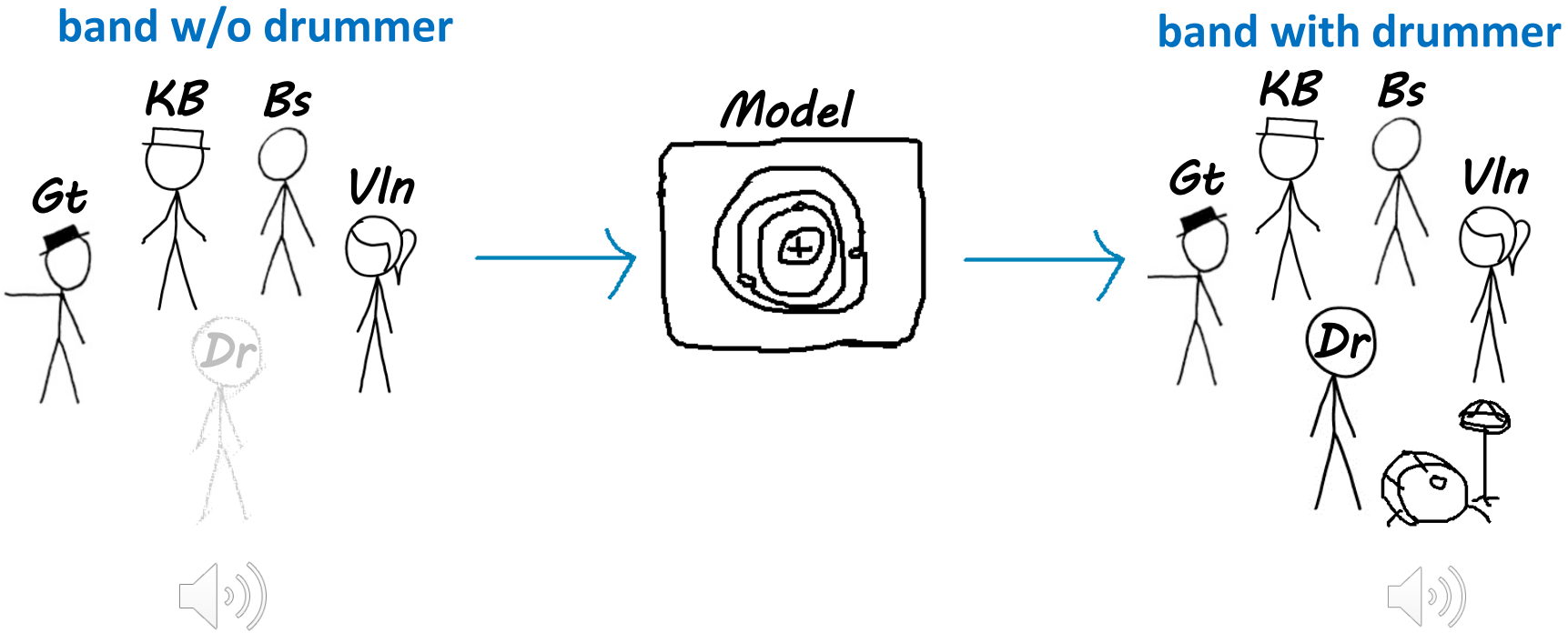
The goal

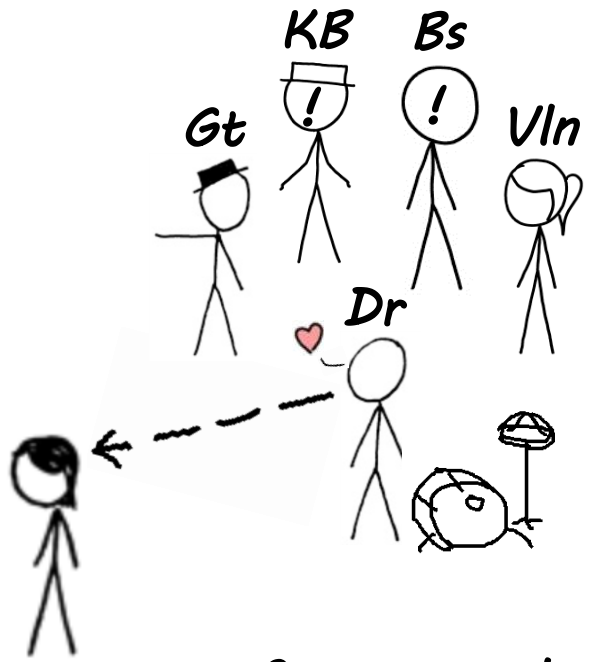
Generating a drum-track that can ***provide rhythmic support*** to a given music.



✓ **Use case 1: Auto accompaniment**
✓ **Use case 2: Interactive performance**

Challenges

When the drummer gets distracted…



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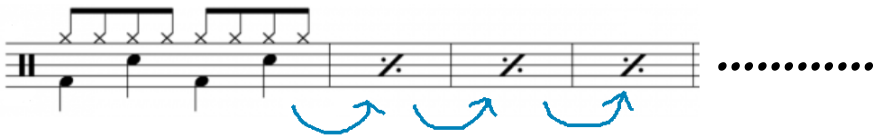

Issues

- ✓ Lack of ***coherence*** between melodic and rhythmic instruments.
- ✓ Lack of ***long-term structure***

Melody-informed drum pattern generation !!

Self-Similarity Matrix (**SSM**) based structural information

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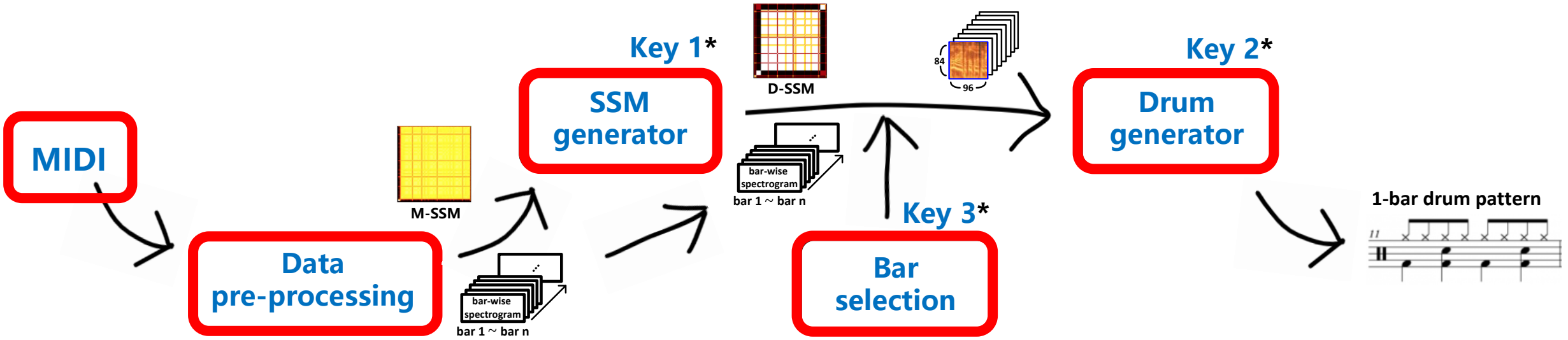
Proposed method



(*NN model*)

✓ **Key 1: SSM generator**

- Generate **drum SSM** via melodic SSM.

(*NN model*)

✓ **Key 2: Drum generator**

- Use D-SSM & bar-wise spectrogram to generate **drum patterns**.

✓ **Key 3: Bar selection**

- Use **drum SSM** to select most relevant **8-bars**.

note:** ***NN models can be trained with LPD

To be continued...

Poster: [G08]

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