

Controllable Deep Melody Generation via Hierarchical Music Structure Representation

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With Music Frameworks and new musical combine music domain features, we knowledge with deep learning, and factor music generation into **sub-problems**, which allows simpler models, requires less data and achieves high musicality.

Background & Challenges

- Model larger scale music structure & multi-levels of repetition •
- **Controllability** & **customization** both macro & micro level
- **Scarcity** of training data & copyright limitations
- **Style** of a specific song \neq style of a genre •

Hierarchical Music Structure Representation – Music Framework



• Generate 2-beat rhythm patterns

instead of note onset time one by one

Rhythm pattern vocabulary & structure & similarity

> A Variaty of **Sampling** methods

E.g. Integrate Dynamic Time Warping

> Multiple Options for Repeated **Phrase Variation**

