Model Card

Beat Shaper

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Basic information

Beat Shaper is a generative model for symbolic electronic music sequences, developed by Beat Shaper FlexCo. The model is proprietary and is not distributed to third parties; it is used only within the Beat Shaper application. For questions about the model, contact info@beatshaper.ai.

The model is a small (< 10 million parameter) GPT-style autoregressive Transformer.

Intended use

The model generates short, editable electronic music sequences (multitrack loops with drums, bass, and synth material) from a set of structured generation parameters. These parameters (including genre, mood, complexity, rhythmic controls, key, drumkit and instrument presets, and BPM) can be set directly through UI controls in the Beat Shaper application, or produced by an optional text prompt interpreter that converts a natural-language description into the parameter set. The model conditions on these parameters and generates the sequence as a univariate token stream, which a post-processing step converts into music notation.

The model is intended to help users create musical starting points that they can then regenerate, edit, export, and arrange. It supports six electronic music genres: Acid, Breakbeat, Hip-Hop/Trap, House, Techno, and Trance. Intended users range from beginners to experienced music producers.

Out-of-scope uses: the model is not intended to autonomously produce finished commercial tracks without human review or editing, and it is designed only for instrumental electronic music within the supported genres and controls. The model itself produces symbolic music data in a proprietary format intended to be used within the Beat Shaper platform, not as a standalone music generator. The optional text prompt interpreter is a separate model and is not covered by this card.

Training data

The model was trained on a synthesized dataset of parameter-conditioned symbolic music sequences. The base corpus was approximately 20,000 individual instrumental MIDI loops licensed for AI model training purposes from two sample loop pack providers. Internal compatibility models were used to determine which loops combine well musically (for example, which drum patterns, basslines, and melodies are compatible), and these combinations were used to synthesize a much larger training set of sequences. The training data therefore consists of combinations derived from the licensed base loops rather than from independently sourced material. The model was not trained on user data or scraped content.

Description of the evaluation data

The model's training time evaluation used a held-out validation set consisting of a random 1% split of the same synthesized dataset. The validation data is drawn from the same distribution as the training data and is used to monitor convergence and select the best checkpoint.

Analysis of model performance

Beyond validation loss, Beat Shaper models are assessed using a suite of intrinsic, domain-specific quality metrics. These cover structural validity of the generated token sequences, rhythmic and groove consistency, similarity of the generated distributions to the training distribution, and musical compatibility between the generated tracks.

Data privacy considerations

The training data consists of licensed loop material and does not include personal or user data.

Caveats and recommendations

Beat Shaper generates output in a non-standard symbolic format that is meaningful only within the Beat Shaper application, where it is converted into music notation and audio. Generated sequences are intended as editable starting points rather than finished tracks. The model supports instrumental electronic music within the six supported genres and the available generation controls.