

GUITAR-SLASH
A LEAD GUITAR PERFORMANCE TECHNIQUES
DETECTION SYSTEM USING DEEP LEARNING

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Abstract

Lead guitar part of a song or in a music piece is the melody section that is played by a guitar, where the guitar is highlighted above all the other instruments and any singer. These lead guitar parts are very popular among guitarist but are harder to play than a rhythm guitar. The difficulty also comes with the knowledge a lead guitarist should have on the domain. And with that said, a player who can play them are considered to be good guitarists in general. Therefore, beginners are popularly interested in learning the lead guitar.

There is a specific type of techniques which makes the lead guitar part has its own emotion, and these techniques are bend, vibrato, slide, etc. In order to learn a lead guitar, it is important to identify and understand these performance techniques. A generic music transcribing system cannot be much suitable in transcribing lead guitar melodies, because of these instrument-specific performance techniques that are there in almost every lead guitar part. Hence there is not a way of identifying these performance techniques automatically, for any lead part a beginner wants to learn.

Guitar-Slash introduces a new approach to detect these performance techniques and annotate them by using the candidate phrase selection algorithm, which is a novel algorithm in phrase selection of a lead guitar solo part, and by using a convolutional neural network to classify each technique that are present.