

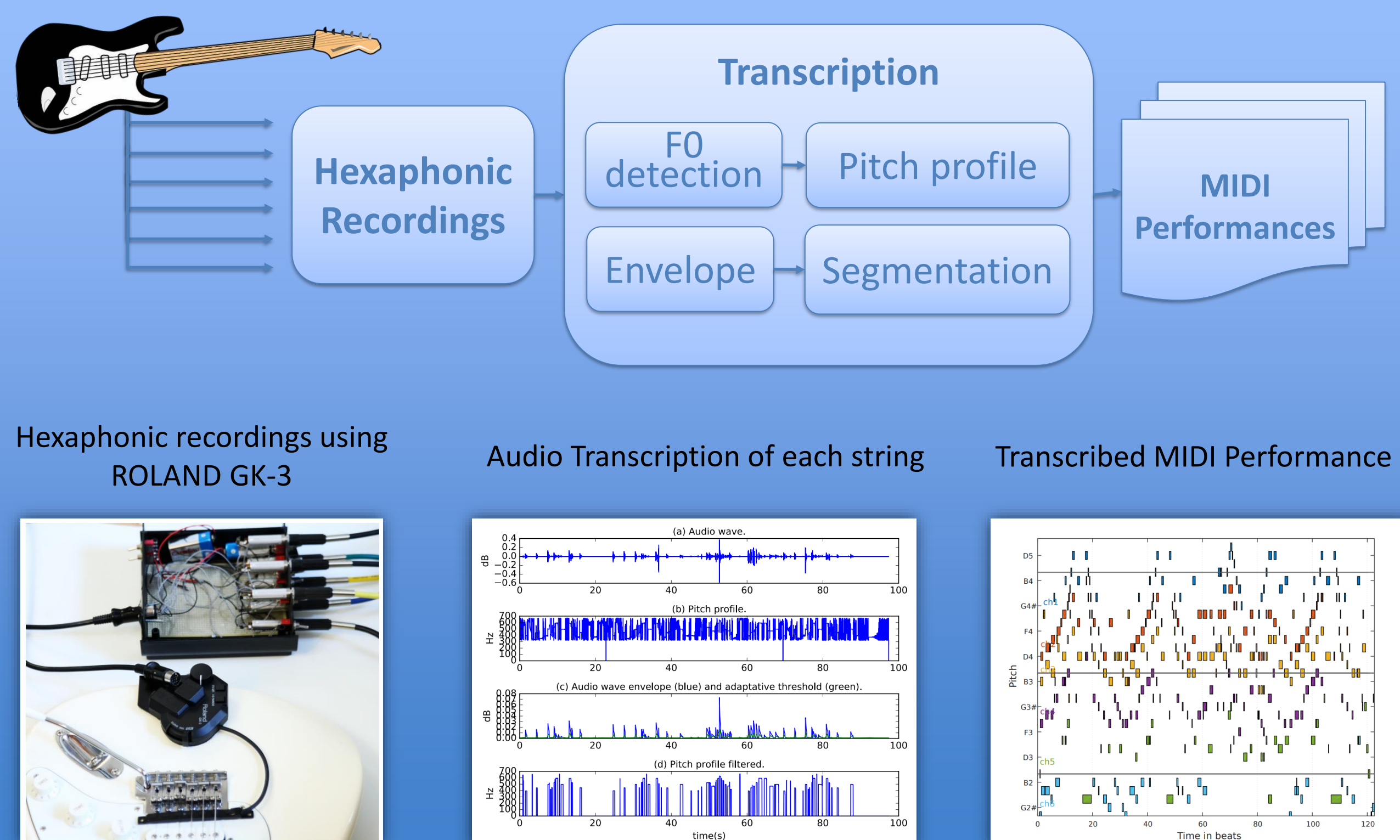
COMPUTATIONAL MODELING OF EXPRESSIVE MUSIC PERFORMANCE IN HEXAPHONIC GUITAR

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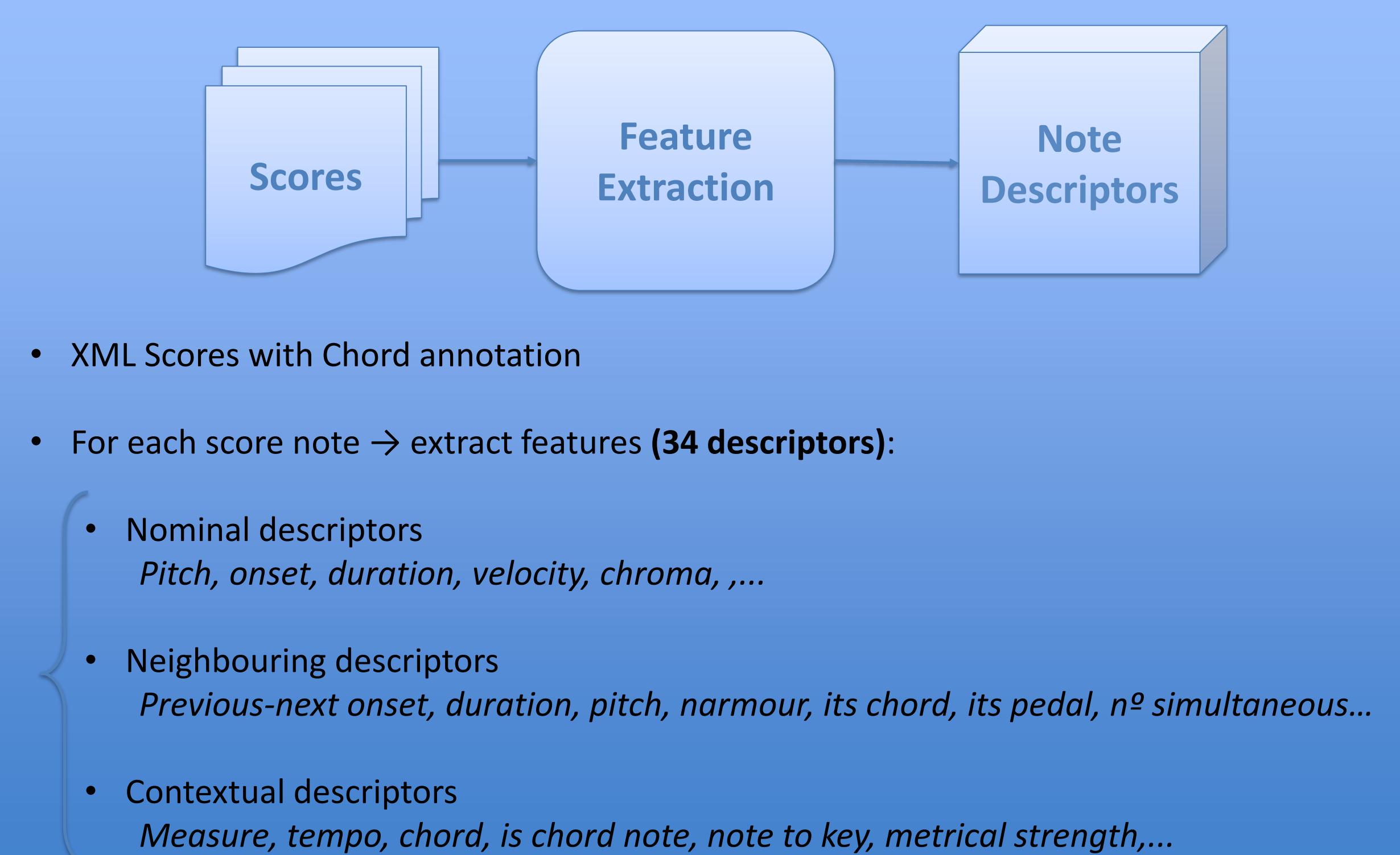
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In this work, we present a machine learning approach to automatically generate expressive performances from non expressive music scores for polyphonic guitar. We treated guitar as an hexaphonic instrument, obtaining a polyphonic transcription of performed musical pieces. Features were extracted from the scores and Performance Actions (PAs) were calculated from the deviations of the score and the performance. Machine learning techniques were used to train computational models to predict the aforementioned performance actions. Qualitative and quantitative evaluations of the models and the predicted pieces were performed.

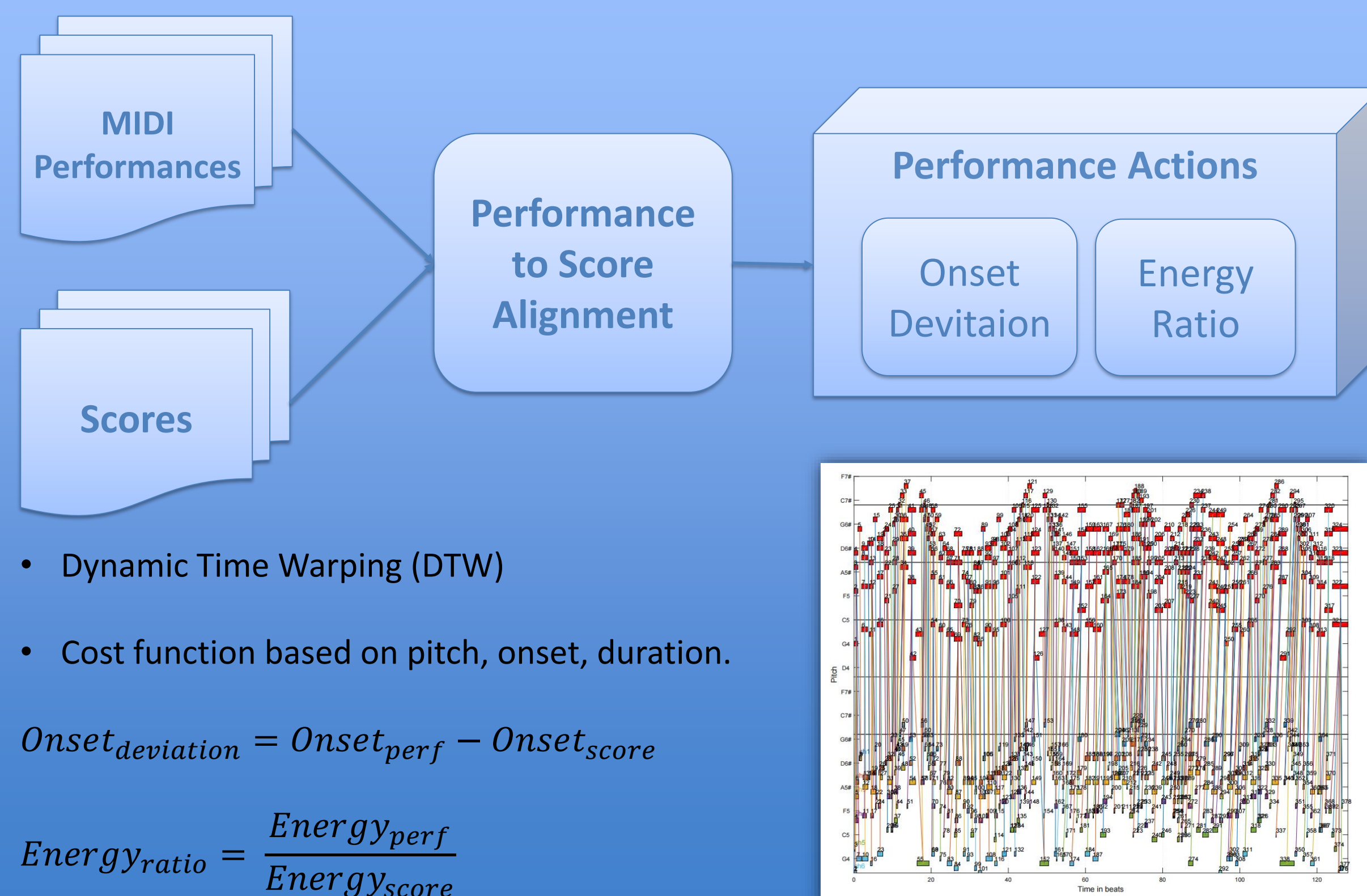
Data Acquisition/Transcription



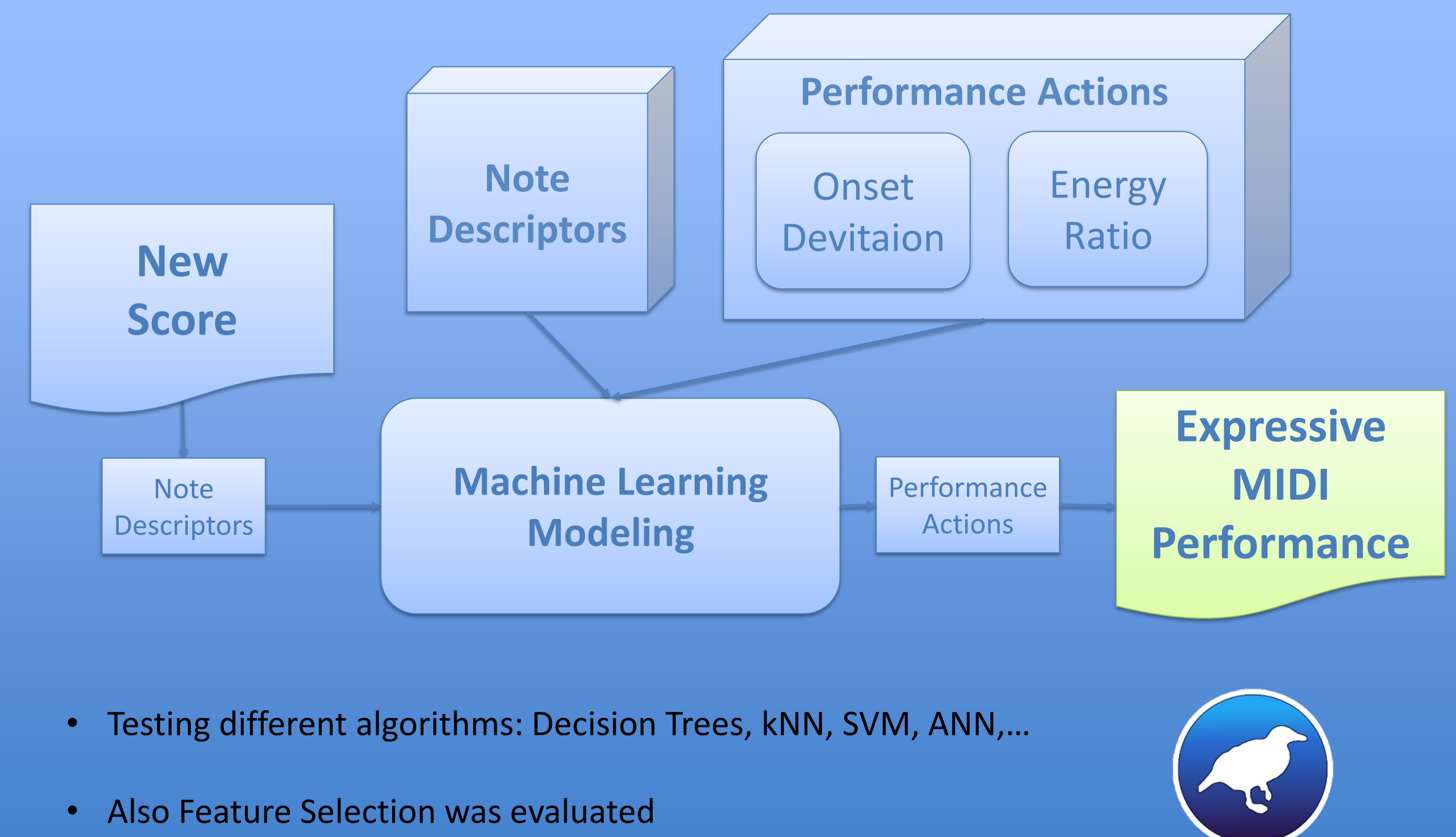
Score Analysis



Alignment and PAs

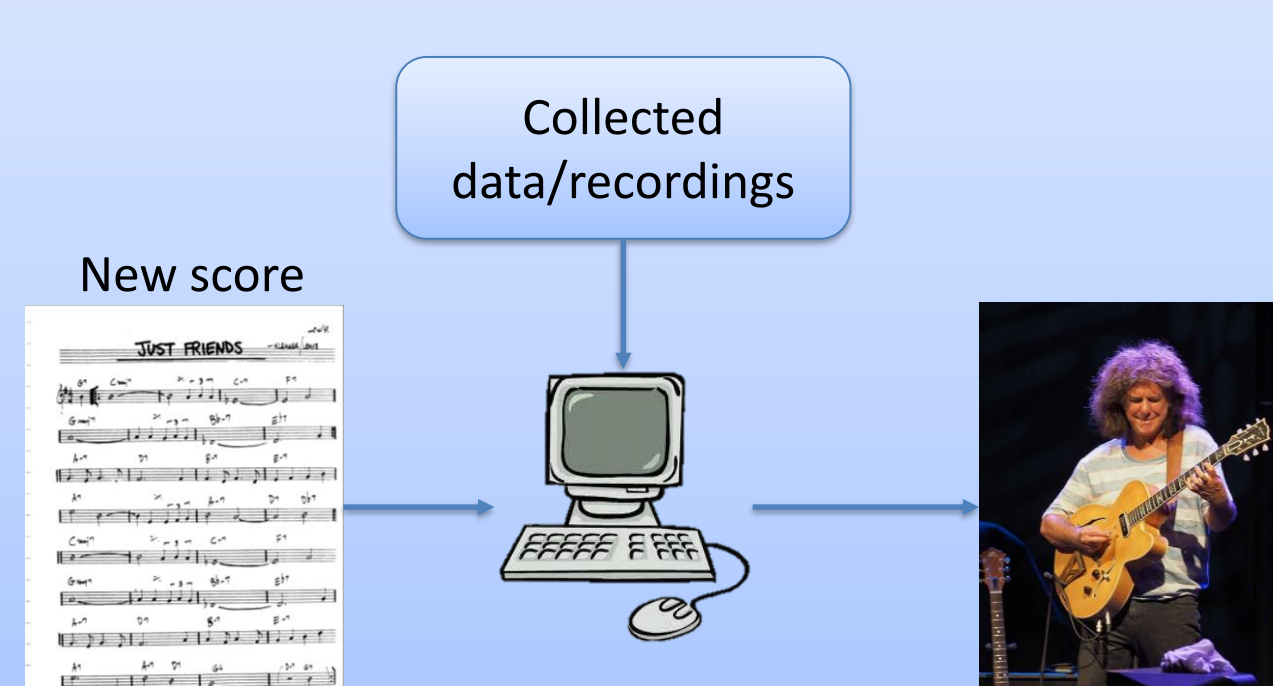


Machine Learning Modeling

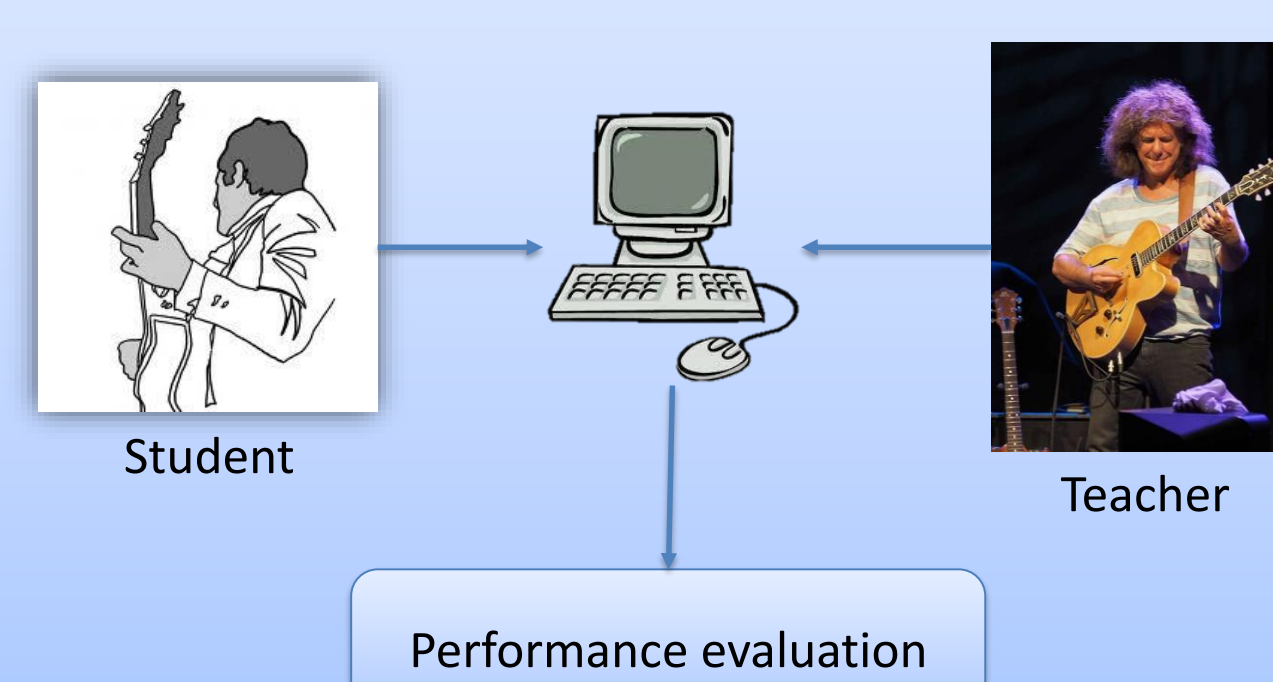


Applications

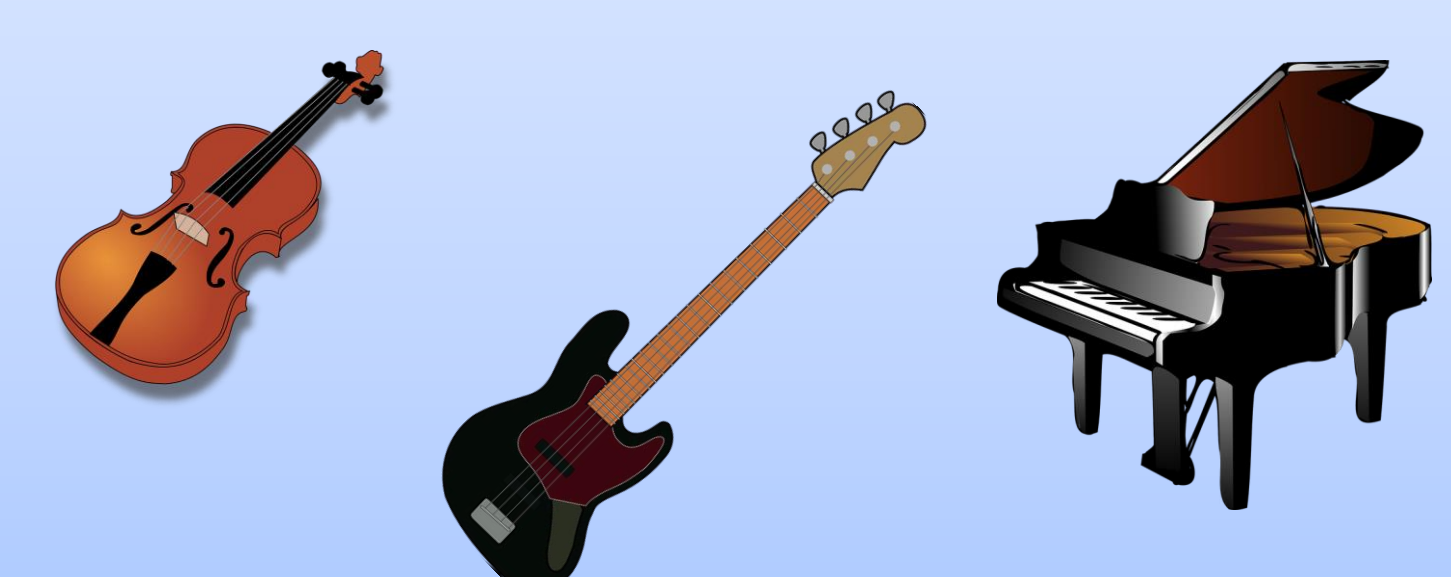
Synthesis of human-like (or artist-like) performances



Systems for interactive music learning



Adaptable framework for other polyphonic instruments modeling



References:

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