



MIRTOOLBOX, OPEN-SOURCE

Advanced use, Architecture description, Open-Source project

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MIRtoolbox is a *Matlab* toolbox dedicated to the extraction of musical features from audio files, including routines for statistical analysis, segmentation and clustering. It features a user-friendly syntax that enables to easily combine low and high-level operators into complex flow-charts. The modular design is guided by a philosophy of expertise capitalization: techniques developed for certain domains of music analysis are turned into general operators that could be used for different analytical purposes. The feature extraction algorithms are decomposed into stages, formalized using a minimal set of elementary mechanisms, and integrating different variants proposed by alternative approaches – including new original strategies –, that users can select and parameterize. A new version 1.3 will be released during the conference.

Advanced Use

Memory management mechanisms allow the analysis of large-scale corpora, through the integration of automated chunk decomposition mechanisms and of distinctive processes for flow-chart design and evaluation. A set of meta-functions have been designed that enable the integration of audio and musical features defined by the user with the help of simple templates.

Architecture Description

The general architecture of the toolbox will be presented, explaining how the integration, into the *Matlab* environment, of a dedicated syntactic layer featuring implicit memory management has been made possible.

Open-Source Project

A new Open-Source project invites all users to actively collaborate to the further improvement of the environment. External contributions will be made available from a dedicated website. A selection of external contributions will be included in future official releases. Contribution selection process will be subject to open discussion as well, and under the supervision of a peer-reviewing committee. Further development of the toolbox core (internal architecture, implementation) will be also subject to open discussion and community-based collaboration.



Music Mining Plant.

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