



THE BEST USE OF GIANTSTEPS TOOLS

#MTF BERLIN HACK CHALLENGE

Tool name

madmom, a music-information-retrieval software toolbox in Python

<https://github.com/CPJKU/madmom>

Description

madmom features a concise, numpy-compatible object oriented design with simple calling conventions and sensible default values for all parameters, which facilitates fast prototyping of MIR applications. Prototypes can be seamlessly converted into callable processing pipelines through *madmom*'s concept of processors. Processors are callable objects that run transparently on multiple cores. They can also be serialised, shared, and re-run to allow results to be easily reproduced anywhere.

Apart from several audio processing tools, *madmom* includes a machine learning module that implements some techniques commonly used in MIR, such as hidden Markov models and neural networks. Additionally, *madmom* comes with several state-of-the-art music information retrieval algorithms for onset detection, beat tracking, tempo estimation, and piano transcription that can easily be incorporated into higher-level systems, or run as stand-alone programs.

Operating environment

Python