Syllabus "Audio and music information retrieval"
M2 Data-Science

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Abstract Audio and Music information retrieval is the interdisciplinary research field related to the extraction of semantic information from the audio signal; it allows the development of applications such as speech/music segmentation, recognition (environnemental sound classification, acoustic scene classification, musical instrument recognition), source separation, the estimation of specific music attributes (multi-pitch, tempo/beat, chord, structure), music identification by fingerprint (a la Shazam), cover detection pr auto-tagging (into genre, mood)

This course present the different facets of this field ranging from audio signal representation (Fourier, STFT, Constant-Q transform, audio features), music representation (pitch, chords, rhythm, structure), to pattern-matching and machine-learning models (DTW, HMM, generative/discriminative learning and deep learning).

Format : 6 sessions of 3.5 hours + Exam

Grading : 30% labs/project + 70% written exam