Tutorial 6

Teaching Music Information Retrieval

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Abstract

The research field of Music Information Retrieval (MIR) has a history of more than 20 years. During this time many different tasks have been defined and a variety of algorithms have been proposed. MIR topics are taught around the world in a variety of settings both in academia and industry. The teaching of MIR takes many forms ranging from teaching regular undergraduate and graduate courses to delivering specialized tutorials, seminars, and online courses. MIR is a fundamentally interdisciplinary topic and that creates unique challenges when it is taught. The goal of this tutorial is to cover various topics of interest to people involved with teaching MIR. The material covered is informed by modern pedagogical practices and how these practices can be adapted to address the unique characteristics of learning about MIR. The global Covid pandemic has resulted in increased activity and interest about online learning. Advice and guidelines for effective online teaching of MIR will also be provided. The presented concepts and ideas will be illustrated using concrete examples and use cases drawn from extensive experience of the tutorial presenter with teaching MIR in a variety of settings. Although this is not the primary focus of the tutorial, these examples can also serve as an introduction to MIR for participants that are new to the field.

Biography of the Presenter

George Tzanetakis is a Professor in the Department of Computer Science with cross-listed appointments in ECE and Music at the University of Victoria, Canada. He was Canada Research Chair (Tier II) in the Computer Analysis and Audio and Music from 2010 to 2020. In 2012, he received the Craigdaroch research award in artistic expression at the University of Victoria. In 2011 he was Visiting Faculty at Google Research. He received his PhD in Computer Science at Princeton University in 2002 and was a Postdoctoral fellow at Carnegie Mellon University in 2002- 2003. His research spans all stages of audio content analysis such as feature extraction, segmentation, classification with specific emphasis on music information retrieval.

He has designed and developed for Kadenze Inc. the first widely available online program in Music Information Retrieval consisting of 3 courses that were launched in December 2020. More than 2000 students from around the world have been involved with the program. He is also the primary designer and developer of Marsyas an open source framework for audio processing with specific emphasis on music information retrieval applications. His pioneering work on musical genre classification received a IEEE signal processing society young author award and is frequently cited. He has given several tutorials in well-known international conferences such as ICASSP, ACM Multimedia and ISMIR. More recently he has been exploring new interfaces for musical expression, music robotics, computational ethnomusicology, and computer-assisted music instrument tutoring. These interdisciplinary activities combine ideas from signal processing, perception, machine learning, sensors, actuators and human-computer interaction with the connecting theme of making computers better understand music to create more effective interactions with musicians and listeners. More details can be found http://www.cs.uvic.ca/~gtzan.