

A deeper understanding of common elements in musical rhythm

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When listening to an unfamiliar style of music, we attempt to tap the beat and to synchronize with the rhythm, a process that enables us to interpret the structure of what we hear. This process is made possible by properties of music encountered in cultures throughout the whole world. In this project, we aim to identify such common properties in musical rhythm and their culturally dependent interpretation by applying a novel multidisciplinary methodology that combines the perspectives of engineering and humanities. Our insights into common elements of musical rhythm will be shaped into software that is capable of analyzing rhythm in many musics of the world. Until now, most software development related to music focuses on musics of the Western world, and our project aims to direct the attention to a larger cultural diversity of music.

In this very moment, epoch-making developments in artificial intelligence give us the tools we need to explore the borders and potentials of machine learning in application to music as a cultural expression. We will approach discovering common elements by answering important research questions from ethnomusicology with the help of innovative software approaches that incorporate the recent trends in artificial intelligence.

Our developed models will offer perspectives for a fair and balanced music recommendation and distribution in digital platforms and offer radically novel scientific perspectives on music analysis within engineering and humanities. Our project will promote a deeper understanding of music that suits the needs of a new digital age and indicates ways to connect musicians and listeners across cultural borders.