

Z604 Music Data Mining

Course Information

- Time: Tuesdays 9:30 AM to 12:15 PM
 - Instructor: Kahyun Choi
 - Indiana University Bloomington
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Course Description

This course gives an introductory overview of the field of music data mining, which is the process of extracting invaluable information from digital audio signals and various music-related text data, such as lyrics, music reviews, and social tags. Lab tasks and the final project will provide hands-on experiences in applying machine learning and deep learning techniques to those various kinds of music data. Topics covered in this course include audio and textual data analysis, classification, clustering, and recommendation.

Course Topics

- Week 01: Introduction
- Week 02: Music and Audio Content Analysis using Librosa
- Week 03: Linear Regression | Music Mood Regression
- Week 04: Logistic Regression | Music Mood Classification
- Week 05: Classification and Evaluation | MIREX
- Week 06: Support Vector Machine | Music Genre Classification
- Week 07: Deep Learning Basics
- Week 08: Convolutional Neural Networks | Large-scale Music Genre Classification
- Week 09: Recurrent Neural Networks | Automatic Music Tagging
- Week 10: Spring Break (No Class)
- Week 11: Text Preprocessing and Representations | Music Mood Classification using Lyrics
- Week 12: Attention Mechanisms | Music Genre Classification using Reviews
- Week 13: Topic Modeling | Song Topic Identification
- Week 14: Trend Analysis | Music Trend Analysis
- Week 15: Recommendation | Music Recommendation
- Week 16: Final Project Presentation