Using Machine Learning Creatively via FluCoMa in Max

Music Hackspace Workshop
Saturday, October 22, 2022
11am Eastern

Introduction

11:00-11:15

- What is FluCoMa?
- Configure and Install FluCoMa in Max

Patches / Topics

Slicers (Temporal Separation)

11:15-11:25

- ampslice (patch #01)
- Musical Example: check out the article on Lauren Sarah Hayes' *Moon via Spirit*

Decomposition (Spectral Separation)

- hpss (patch #02)
- Decomposition with NMF (patch #03)
- Musical Example: check out the article on Olivier Pasquet's *Herbig-Haro*

Analyzing Audio

- pitch (patch #04)

Plotting Audio Slices

- spectralshape (centroid)
- loudness (loudness)
- bufstats
- fluid.plotter (patch #05)

Dimensionality Reduction

12:00-12:15

- MFCC Analysis
- UMAP (patch #06)

- Musical Example: check out the article on Ted Moore's *quartet*

Real-Time Concatenative Synthesis

12:15-12:30

- KNN (patch #07)
- Scaling Data
- Musical Example: check out the article on Rodrigo Constanzo's *Kaizo Snare*

Neural Network Classifier

(patch #08)

12:30-12:42

- Musical Example: check out the article on Alex Harker's *Drift Shadow*

Neural Networks Regressor for synth control

(patch #09)

12:42-12:55

- Musical Example: check out the article on Alice Eldrige and Chris Kiefer's *FeedbackFeedforward*

Follow-Ons

12:55-1:00

- learn.flucoma.org
  - Reference
  - Learn Overviews
  - Explore (Example Projects. . . and patches!)
- https://www.youtube.com/c/FluidCorpusManipulation (tutorials!)
- More about Machine Listening with Alex Harker (https://www.youtube.com/watch?v=Sh7LvH39dsY)
- ted@tedmooremusic.com