Programming the 808: A project-based unit for rhythm pedagogy

Justin London
SMT 2017 Pedagogy SIG
Meet and Greet the 808
Meet and Greet the 808

• Listen to famous tracks using the 808
  – Talking Head’s “Psycho Killer”
  – Marvin Gaye’s “Sexual Healing”

• Play around with the controls
  – Note what the control layout presumes (4/4)
  – Note what sounds the 808 attempts to replicate

• Demonstration programing
  – https://www.youtube.com/watch?v=XRCdLN-brkI
Meet and Greet the 808

SynthMania quick tip #6
Marvin Gaye's "Sexual Healing"
Roland TR-808 pattern

by SynthMania.com
January 29, 2012
Assignment #1: Programming

• Task is to create two “beats” (drum loop patterns)
  – A “good” pattern that is interesting and danceable
  – A “bad” pattern that is, well, not
• Students document the process by which they created their good and bad drum loops
• Drum loops are presented in class, ranked, and discussed.
Assign. #2: Representing Rhythm

• Having created a good and a bad beat, students then must notate them:
  – Using TUBS notation
  – Single-line using traditional rhythm orthography

• Students then reflect as to which form of notation is most useful for . . .
  – Enabling someone to recreate the 808 loop
  – Allowing someone to perform the pattern
  – Studying the pattern
Assign. #2: Representing Rhythm
In Class: Rhythmic Complexity

• Students read chapters from Godfried Toussaint’s *Geometry of Musical Rhythm*
  – They learn to turn their notation into a binary necklace: “101010010100”
  – They learn to index the interval content of their necklace, represented as histograms
  – They learn how calculate the Shannon Entropy of their rhythms based upon the total interval context of their pattern
Assign. #3: Analytic Essay

• After listening to, discussing, noting, and analyzing your rhythms, defend one of the following claims (you must pick one):
  – My good rhythm really is better than my bad rhythm
  – My bad rhythm, I have come to realize, is actually better than my good rhythm
  – My good rhythm isn't really any better or worse than my bad rhythm.

• Use of their representation and entropy/complexity calculations is required

• Proper citations, etc., etc., also required.
Desiderata

• Gets students to grasp how technology embodies musical culture and practice
• Allows for creative play
• Allows for substantive engagement for students with widely varying musical backgrounds
• Integrates composition, analysis, and writing
• Stimulates student interaction and discussion
And your students can do this too.