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Art Tech
Final Project Proposal

Conceptually:

I would like to create the basis for a performance piece, in which the rhythms of my tap dancing would produce wild visuals. I would like to design a system wherein the nuances of sound (the difference between a brush, heel, dig, scuff, etc.) would each create an individual visual effect. I am currently deciding on what I want the visuals to look like: whether they should be city-inspired shapes, popping up in a bold, theatrical manner (an homage to the urban origins of tap); flowery and floating imagery, ripple or petal like shapes that melt into one another, juxtaposing the clarity of tap; or something involving line and abstraction, staccato squares and fun squiggles, pushing a more playful tone for the piece. Ideally, steps in fast succession would trigger multiple visuals at once, creating a digital masterpiece with the increase of tempo. The visuals would be projected either on the floor being danced on, or on the wall behind me, adding a new and attractive element to this historic and dying art form.

Technically:

I would be using Processing and an external microphone to collect, analyze, and splice the frequencies of sounds created by my taps. Using the minim library and FFT in Processing, I would be able to pinpoint the moment when the sound of my tap reached a certain frequency. From there, I would code a series of "if" statements, causing the moment of exact frequency to trigger a specific visual onscreen. By specifying different frequencies and moments, I would create a system that could hear the nuances of my taps, and prompt different visuals based on each. For the visual aspect, I would explore shapes that we have not exactly covered in class (i.e. squiggles), playing around with opacities and colors.

Materials:

- External microphone
- Computer with Processing
- Wooden board/floor
- Tap shoes
- Projector