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## Drum set using sound input from my phone

For this wekinator project, we had to make an instrument by using wekinator. Being a foreign exchange student, I have been away from my instruments in my home country so I wanted to be able to recreate my set of drums so that I could practice while being away from home.

To be able to practice, I need to be able to hit something and for it to give a similar feeling to when I play the drums. I decided to use a glass bowl with a plastic top, a hard bottle and a knife as the percussion mallet (drum stick).

For me to be able to get data when hitting these objects, I need my phone to get the frequency of the sound made from hitting each object. I can then train wekinator to recognize these sounds and classify them as snare, hi-hat and bass.

I train wekinator for four different scenarios.

- 1- I hit the plastic part of the bowl with the knife
- 2- I slide the bottle across a table
- 3- I hit the bottle using the knife
- 4- Default : No sound present

I then assign different sounds to these scenarios.

Scenario 1 : Hi-Hat sound

Scenario 2 : Bass sound

Scenario 3 : Snare sound

Scenario 4 : No sound

I add a part to my code to make sure the sounds only play once when the scenario changes and don't repeat all the time.

I can now use this code to practice drumming and do different basic combos that only require the bass, hi-hat and snare.

The one problem this code has is that any inconsistency in the wekinator class detection causes a sound. This is very noticeable if the sound is off beat.

I wasn't able to record a demo of the project because my phone cannot send osc data from audio input and take a video at the same time. I attached a video of the different sounds I trained my model with.