Second Proposal:

Keeping the idea of creating music through our body with a different perspective

Focusing on dancers

Context: Usually dancers either dance on a premade track or dance without any music in the background. The only way dancers will create their own sounds without premade music is through physical objects or their bodies (e.g., haka, gumboot, etc). We want to explore another perspective of creating our own music through a computer-generated sounds computing.

Project: Creating a sleeve and a high sock containing sensors on or within them. Each wearable textile has its own Arduino, containing its own sound library. A loop of computer-generated sounds will vary depending on the pressure, axis of movements and muscle contractions.

(Bonus idea: To push the project further, we want to install a Kinect connected to its own Arduino and sound library that detects the location of the dancer in the environment, in which the melody will change according to the dancer's location in the room.)

(Bonus Idea2: Instead of a Kinect, create a carpet that detects the x/y position of the dancer, dancer's position will vary the computer-generated melody, the carpet will have its own Arduino and sound library)

Purpose: Push limits of creating performance beyond physical sounds or premade tracks.

Challenge: The dancer has to deal with how his body sounds and looks likes. The sounds the body will produce do not mean pleasing movements to see. The dancer will need to figure out what computational sounds allows to create as a choreography. It also pushes the bounds of what is possible in music-making. The dancer has to balance the performance by both executing a powerful choreography and creating a beautiful melody through its body.

Components:
-Mini-breadboards
-Myoware sensors
-IMU sensors
-Force Sensitive Resistors
-(Flex Sensors)
-(E-textile prototyping kit)

Other Ideas:

-Using Mozard as one of the microcontrollers containing notes
-conductive/electric paint

-LED shield

Questions:

-Libraries available for Arduino Uno?

-GPS module or Kinect?

-How to fix wires? By soldering them?

-Other option than wires to connect components to circuit?

-What is the size needed for the breadboard to make our circuit?

-Remote circuit (idea->maybe use portable battery)?

-Is putting sensors within textile pad better for security/comfort/ protection?

-(Myoware) does switching mode according to value range of Myoware analogRead is a good idea

-Which sound output device has a better sound than a Piezo buzzer?

-Tips on Myoware: How to make connections work? Should we solder it? Any other good use of it?
-How durable the Myoware sticker is?

References:
https://theorycircuit.com/myoware-muscle-sensor-interfacing-arduino/

https://www.seeedstudio.com/blog/2020/01/17/what-is-imu-sensor-overview-with-arduino-usage-guide/

https://create.arduino.cc/projecthub/thelastjedi/pressure-pad-interfacing-with-arduino-efacad?ref=search&ref_id=pressure&offset=0

https://create.arduino.cc/projecthub/Juliette/a-diy-smart-insole-to-check-your-pressure-distribution-a5ceae?ref=search&ref_id=pressure&offset=14

https://create.arduino.cc/projecthub/touchmysound/fingerscan-music-at-your-fingertips-c224c4?ref=search&ref_id=music%20buttons&offset=1

https://create.arduino.cc/projecthub/rachel-fagan/glow-pillow-with-force-sensing-resistor-904229?ref=search&ref_id=pressure&offset=17

https://create.arduino.cc/projecthub/glove-team/motion-tracking-glove-8c0e4f

Components references:

https://www.sparkfun.com/products/8606

https://www.sparkfun.com/products/9375
https://www.sparkfun.com/products/12922

https://www.sparkfun.com/products/15335

https://www.tofstuff.com/Mozard/Mozard

https://www.sparkfun.com/products/14409

Adafruit flora
need to solder
communication sounds between 2 individuals
not use Bluetooth, find another way to make communicate two microcontroller
Bluetooth usually communicate between device and microcontroller, not 2 microcontrollers communicating between each other
Mozard
wifi radio/freaquency
conductive threads