Caitlin Manes

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**Project Proposal**

For our project, we want to build a system where you are the conductor of a microcontroller orchestra. We will use a photoresistor to control tempo and possibly another photoresistor to control volume. (This is a stretch goal.) The tempo will be controlled by moving your hand up and down, much like the conductor of an orchestra would move his/her baton. The volume will be controlled by your hand’s position from the photoresistor, also like a conductor would use his/her hand to tell the orchestra to play softer or louder. We plan to use a digital potentiometer to change the volume of the speaker. We will also calibrate the photoresistors by exposing them to room lighting and with your hand close to them (simulating the darkest reading). The calibration will be stored in the flash memory on the MSP430 so it can be loaded rather than recalibrating on every new program run.