Modernized Universal Eating Monitor
Henry Tse, Khang Vu, Cory Zheng; Dr. Hasan Ayaz, Ph. D.

Unmet Needs of Eating Monitors:
- A plate or bowl sits on top of the UEM, and it records the change in weight of the meal over time
- Used by nutritional researches
- Current solutions aren't able to record the weight continuously and record the spatial distribution of weight

Objective:
- Create a modernized UEM that records weight non-intrusively, continuously over time, and records spatial distribution

Solution:
- Triangle pad that sits atop 3 FX1901 sensors
- Nubs at each corner of pad directly contacts sensors
- Bowl or plate sits on top of pad

Requirements
- A minimum sensor number of 2
- Temporal resolution of 1 second
- Sensor will be required to handle 30-300 grams

Approach:
- Step 1: Find Sensor - FX1901 Load Cell Sensor
- Step 2: Find ADC - HX711
- Step 3: Establish recording instrument - Arduino Uno
- Step 4: Design a pad

Result:
- The results are able to show that the design was capable of accurately measuring up to 300g
- There was only a ± 1g difference between the total average weight and expected weight