Build 18 Project Proposal

**Project name:** Local Weather Analyzer

**Description:**

We will use the Particle prototype, and sensors that collect data relevant to weather analysing to build a module that can collect weather data, without ever running out of charge for years. Once data is collected, it will be sent to a server to be analysed. Multiple modules would be used in an area as a sensory array to provide more accurate and local on the spot weather data to meteorology centers worldwide. With enough sensors, a machine learning algorithm can be used to help predict weather in a certain area.

**Parts:**

(sparkfun) 2x Particle Photon kit 2 x $19 = $38

2x BMP180 Breakout board 2 x $9.95 = $19.9

2x HTU21D breakout board 2 x $14.95 = $29.9

2x Soil moisture sensor 2 x $4.95 = $9.9

(Oshpark) Custom PCBs -self supplied-

(Amazon) small solar panel 50mA, 4v.(2pk) 1 x $9 = $9

2 Pack Olight 2600mah 18650 Li-ion 1 x $19.95 = $19.95

total = $126.65

**Motivation:**

The inaccuracy for modern data and the lack of a widespread, nationwide, weather data gathering system.

**Team members:**

Cem Ersoz (CS), Harvey Shi (ECE), Sander Shi (CS), Zixu Lu (ECE).