Minimal Functionality

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I. POWER

- Operate using battery power
- Operate using AC mains power
- Supply 5 V to the Arduino through a USB input.
- Supply appropriate voltages to sensors.

II. SAMPLING AND INTERFACING SENSORS

- The sensor will transfer the measured data to the microcontroller via the interface.
- Sample at a minimum of 2 Hz.

III. MICROCONTROLLER

- Store data onto a USB flash drive.
- Receive analog voltage, analog current, and digital data from the interface.
- Send data to the Communication subsystem.

IV. COMMUNICATION.

- Receive data from the Microcontroller, format the data, and send the data through the use of Wi-fi to be displayed on a terminal.

V. WEB AND WIRELESS.

- Receive data from the device and have a simple display in a numeric form.