



**A. Measure Power and Voltage**

1 - second RMS Data

**B. Normalize:**  $P_{\text{norm}} = \left(\frac{127}{V}\right)^2 P$

1 Hz Normalized real, reactive power on each leg

**C. Edge detection**

List of step changes

**D. Cluster Analysis**

Cluster of step changes

**E. Build Appliance Models**

On/Off models or FSMs

**F. Track Behavior in Terms of Models**

On and Off times of each appliance

**G. Tabulate Statistics**

Energy vs. Time of day

**H. Appliance Naming**

Consumer's name for each

Unsupervised Approach

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