ElectriSense monitors EMI on the powerline to provide whole home device-level usage data using a single easy-to-deploy sensor.

**Motivation**
- Most modern consumer electronics use a Switched Mode Power Supply (SMPS) that generate Electro Magnetic Interference (EMI).
- SMPS based devices are becoming pervasive.
- Leverages existing infrastructure.

**Event Detection & Feature Extraction**

**Applications**
- Activity Inferencing
- Disaggregated Energy Feedback
- Smart Homes

**Performance**
Accuracy in % for device identification in seven homes

- 10-fold Cross Validation
- Minimum Training

**Temporal Stability over 6 months**

**Homes**

- H1
- H2
- H3
- H4
- H5
- H6
- H7