**Technology Overview**

Non-intrusive Home Energy Measurement

Our project is a home energy measurement system that can split the total energy usage of a home into the individual appliances. This allows for the homeowner to see where their energy bill is coming from and which appliances could be upgraded to lower it. It can also predict increases in usage from shifts in weather, such as a heating system running more during cold weather. Existing technology to do this is either expensive or difficult to install and use.

Potential Benefits

**Size** - Our project uses machine learning to predict usage for each appliance rather than measuring them separately like some competitors

**Simplicity** - Our project is easier to install and use than other’s

**Cost** - Our project is lower cost (under $100 rather than hundreds to thousands)

Other uses

**Apartment complex & dorm management** - apartment complexes that pay for utilities could view the complexes as a whole and see if there are any outliers in energy usage

**Solar management** - measure incoming power generated from PV cells