Project Title: Smart Fridge

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Project Description:

A Raspberry Pi mounted to a refrigerator that monitors the current temperature and detects every time the door is opened. The data will be uploaded to a server, which will determine if the temperature threshold has been surpassed and alert the owner. The alert will also detail whether or not the door is open. The Raspberry Pi will utilize the Raspbian OS. Scripts written in Python will process the output from the sensors and output the data to a website through Amazon Web Services. Scripts written on the website will be used to alert the owner.

Technologies Used:

Python, Amazon Web Services, HTML, PHP, JavaScript

Hardware Used:

Linux Raspbian Jessie, RPi 3, temp sensor(s), magnetic door sensor(s)

Project Plan:

Phase 1 - Rough Working Prototype of core part

Raspberry Pi will be capable of reading the output from the temperature and door sensors.

Phase 2 - Supporting Parts added

Raspberry Pi will be able to communicate with Amazon Web Services.

Phase 3 - Whole System Integration

Multiple Raspberry Pi's will be able to upload the data to the server. The server is then able to notify the owner(s).

Phase 4 - Cleanup of Whole System

At least one Raspberry Pi will be mounted to a refrigerator.

Phase 5 - Cleaned and Ready for Presentation

Multiple operational checks will be performed to ensure complete system is functioning correctly.

Phase 6 - Future Work

Add cameras for added security. Develop the capability of changing the refrigerator's internal temperature.