Bird Feeder Monitor

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Background:

In our increasingly wireless, networked world being able to utilize related skills to create real-world solutions is a valuable skill. This project will explore both ends of that equation to create a wireless monitoring system for remote viewing. Additionally, while the bird feeder topic is a simple one, similar systems to this could be used for remote monitoring of many phenomena such as:

- System failure monitoring with automated repair notification
- Infant/pet location tracking with notification
- Target-triggered surveillance & security systems

Project Details:

This Capstone project attempts to build and evaluate a wireless bird feeder monitor with an electronic eye sensor & wireless webcam for remote viewing that will turn on when a creature attempts to feed. This will be accomplished in the following steps:

1. Acquire an off-the-shelf bird feeder, electronic eye sensor, and wifi webcam based on the results of a market survey of appropriate hardware.
2. Setup feeder & webcam in a suitable location.
3. The CS student will generate software to enable remote viewing of the webcam via the internet and an app for either Android or iPhone OS (or both).
4. The EE student will create a short-range transmitter/receiver pair to relay the electronic eye sensor status of “broken/unbroken beam” to determine when the webcam should be turned on.
5. Both students will work together to interface the sensor & webcam so that tripping the electronic eye will turn on the webcam and notify the cell phone app.