DONG!

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We do not have a doorbell, nor do my parents. All visitors and delivery men need to bang on our living room window to get our attention, and in the case of my parents, who live in a large farmhouse, there is not a hope of getting their attention.

Therefore, my project will be a smart doorbell, or Dong. A doorbell that has a camera that will notify you of your visitor through your mobile phone. And as it's 2020, a contact free "voice activation" feature can be used. It should do a number of things:

1. The device should detect movement near the door, prompting a display to display a message on the device and prompt a 20 second recording.
2. It should be activated either by pushing a button like a traditional doorbell or through voice activation by saying the word "Dong" or "Hello".
3. Upon being rung, it will start a video call through either through a phone app or a chosen 3rd party application with the homeowner, who will be able to answer, see and speak with the visitor.
4. The recording triggered by motion should be saved to a local cloud drive, not on the device itself. This could be viewable on a phone application.
5. Ending a call will reset the device and turn off the motion sensor for 1 minute to avoid premature reactivation.

Tools, Technology and Equipment

Hardware needed for this project include a Raspberry Pi, a SenseHat, a camera, a PIR sensor, an Adafriut STEMMA Speaker and a Mini USB Microphone. Other hardware may be added as needed, and this document will be updated accordingly.

Primary programming language to be used is Python, with additional languages incorporated as needed. This document will be updated appropriately.

Additional resources to include WD MyCloud for file saving, Google Text to Speech Service for voice control, and a 3rd party web call service such as Google Hangouts or Jitsi Meet, suitability to be tested.

Project Repository:

https://github.com/WergiForce/IOT-Application.git