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Project Repo URL : <https://github.com/killianoneachtain/PISecurity>

Youtube : : <https://www.youtube.com/watch?v=ZMH0SXY2Vk8>

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| Grade Band | Combined Knowledge | Networking Technologies | IoT Solution | Communication |
| Base | Computer systems, networks (python/bash script) | Raspberry pi 4 with PIR module and pi camera hardwired to RPi | When motion is sensed, a photo is captured an email is sent via gmail, and images stored on Azure Storage | Readme.md on Github |
| Good | ICT Skills 1(javascript/node.js) | WiFi(RPi connectivity), Blynk  Virtual Pins connects iPhone to Raspberry Pi | Photos taken are uploaded to Azure storage | Relevant files on github for viewing with branches and commit history |
| Excellent | Programming Fundamentals (arrays/lists/loops/conditionals/  functions) | SMTP use for email incorporating MIME,  SMB for file transfer to Azure | Blynk controlled on/off switch for running application. |  |
| Outstanding |  |  |  |  |

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Additional Comments:

* I was quite happy with working out the logic of the stopwatch/timeout of the photo taking. After a photo is taken, if no other is taken after 30 seconds, then an email is sent with several attachments of the photo ‘burst’.
* Spawning the python program from the node application, when the Blynk button is ‘ON’, and killing the process when Blynk button is ‘OFF’.
* Sending file to Azure Storage to help keep secondary storage on the Raspberry Pi minimal. The photos’ are kept on the Raspberry Pi until there is an email sent. Each photo is sent to Azure Storage after it is taken.
* There needs to be a function to read the contents of the ‘securityPhotos’ folder, and email to the owner with them attached at startup. In the event of the python program being switched ‘OFF’ during a photo burst, then these photos are left on the Pi. This could potentially lead to many left over files consuming space on the SD card. To be implemented in future versions.

