Last Updated: 10/19/18, 2:34pm

# QR Code Challenge

Prompt: Using a clean installation of Raspbian (ours is dated 2018-10-09) on a Raspberry Pi 3B and a Logitech C310 webcam (or similar model), develop a Python 3 script that does the following:

* Continuously reads a video stream
* In this stream, finds a QR code and decodes it at a minimum frequency of 5 FPS
  + Maximum decoded message length is 12 alphanumeric characters
* Assuming the camera lens and QR code are on the same horizontal level, calculates the relative angle of the QR code with respect to the angle facing the camera (within 10 degrees error at the extremes)
* Should be able to do this when pattern is at least two meters away

In addition to this, I request a short write-up consisting of:

* environment setup so I can replicate it, (PyPI module names are fine, but if any special compilation is required please give me instructions)
* explanations of critical portions of code, and
* links to online resources if you’ve pulled code from online (totally fine by me!!)

Deadline: By the end of the day on October 26th, 2018

Evaluation: I will run a fresh install of Raspbian, attempt to set up the environment as per your specifications, and test the script in a controlled environment with the pattern 2m away from the camera in a well-lit environment. My judgment will be based on the minimal success of the script, any special features included or ease of usability, the maintainability of the code, and the timeliness of submission.

Feel free to message me any questions and I will get back to you with answers as promptly as I can.