Project Concept: CPU Temperature varied RGB Strip

My idea for an IoT project is one that I tried all the way back in first year. Unfortunately, last time around it went horribly and in the end I more or less handed up a proof of concept. The basis of the idea lies in the current trend from the PC gaming industry, in which manufactures will add RGB lighting to everything and anything, from sticks of RAM to mouse-mats.

These products have always interested me, but without any function other than to improve the aesthetic of your computer, I found it difficult to justify the expensive price tag. But, as someone who is interested in building and repairing computers, the idea of RGB lighting with a potential function is a product I would find hard to say no to, given a fair price.

This is where the function comes into play. As someone who has such an interest in PC construction/troubleshooting, something that is always important to monitor is the temperatures of your CPU and GPU. This can be quite a hassle, especially when trying to do so whilst playing games. If it were the case that the colour of the RGB lighting depended on the temperature of the components, it would make troubleshooting (i.e. frame drops in games or even just slower performance in general) a whole lot easier. Furthermore, it would give a good indication as to when you should clean you PC, as, say for example that cold means green, and red means hot. If you run a program/game very often and the lighting of the RGB LED strip is usually in and around the green colour, representing a relatively cool temperature. If one day that the LEDs are suddenly veering more towards orange/red, you would know that something is wrong, either that there is a problem with you're CPU heatsink, or that you're PC might just need to be cleaned.

In terms of actual implementation, all it will take is a python script to obtain the CPU/GPU (either works) temperatures from my PC/laptop, which will be sent out over serial to an Arduino, into which I will connect up the addressable RGB LED strip. A script can be ran on the Arduino to set certain colours for certain temperatures allowing me to use the CPU temperature from the python script to vary the colours of the LED strip.