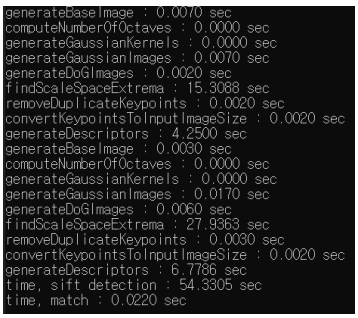
I put time.time() function between each functions to check how much time is needed for each functions. The result of this is shown in below picture. And I found that two functions take long time. First one is ‘findScaleSpaceExtrema’ and second one is ‘generateDescriptors’. The most slow function in this code is ‘generateDescriptros’. There are several ways to speed up this function. First one is changing ‘threshold’ value in ‘findScaleSpceExtrema’ function. When I increase this threshold by modify floor(0.5 * contrast_threshold / num_intervals * 255) to floor(3.0 * contrast_threshold / num_intervals * 255) time reduced more than half. Second way is changing ‘window_width’ parameter in ‘generateDescriptors’ function. Original value of window_width is 4, but I decrease this one to 1. Then the time needed to complete this code reduced more than half. But when speed increased, the accuracy of this code decreased. By this, I figured that there is trade off between time and accuracy in this matching algorithm.

original

change ‘threshold’



change ‘window_width’