EE6222 Assignment-2

2021

1. Find the focal length *f* of your hand phone (in pixels)
   You may use real person or printed figure, and include one figure of the settings in your report. Make sure you turn the camera's "zooming/auto-focusing" off.

   (40 marks)

2. Take two snaps of an outdoor scene, with 5 to 10 degrees angle difference. You need to keep the angle as ground truth.

3. Hand pick 8 points or more from one image, and find the matching points on the other image. These points should not be co-planar. You need to turn these points into N-vector, and submit them into the equation for calculation.

   (10 marks)

4. Calculate the rotation angle from the matched points using the quaternion approach (pp 14 in [4]), or the SVD(in [3]).

   (40 marks)

5. This is a group project. Find a group of **6** and prepare **one** report per group. Each member submit the same report through NTUlearn/Assignments before "07-11-2021, Sunday". Late submission will be degraded by one grade per week. I can help grouping if you failed to do so.

   (10 marks)

   Early submission is encouraged because of large students' number. You are able to view your grades online.