Weekly Report 2

Feb 8 to 15

After learning some basics of open CV and understanding the problem better we focus on learning more specifically about the angle rotation feature, function and commands in OpenCV and the inner mechanics of how the command is executed. For this purpose we refer to some textbooks, web articles, tutorials and web forums which allows us to obtain a better understanding of the rotate function and how it works we use our acquired knowledge to develop a problem statement that we utilise in our presentation that was on Feb 15. The problem statement developed was: OpenCV’s angle rotation functions return an angle of rotation for an object in an image, this angle dictates how the object is oriented relative to the image axes. However, the effect of this rotation on the object's pixels on the actual 2D plane, since OpenCV's coordinate system and rotation conventions are counter-intuitive and confusing. This project aims to understand and quantify this by creating a clear mapping between the reported angle and the object's visual orientation within the image. Developing this problem statement gave us clarity on the issue that we are to resolve and allows us to develop an Initial Approach into it as well. Our approach is as follows, Our approach will primarily measure impact on the actual 2d plane, by observing and quantifying Image transformation (Interpolation, distortion, change in pixel positions). Our model will aim to classify actual angle based on returned angle values and quantified transformation in the image. We use our acquired knowledge to make our presentation and further refine our thoughts, and come to the conclusion that any data sets we utilized will need to be slightly processed and some additional details would be required. We finalize our presentation and present it during the lecture held on 15th February.