**Intern Task (Medical image related)**

Hospital patients can have catheters and lines inserted during the course of their admission and serious complications can arise if they are positioned incorrectly.

The gold standards for the confirmation of line and tube positions are chest radiographs. However, a physician or radiologist must manually check these chest x-rays to verify that the lines and tubes are in the optimal position. Not only does this leave room for human error, but delays are also common as radiologists can be busy reporting other scans. Automatically detection of malposition catheters and lines is useful for early alerts. Once alerted, clinicians can reposition or remove them to avoid life-threatening complications.

Here, there is a zip file attached with this file containing 50 chest X- rays’ images. These X–rays may contain catheters and lines. These are following tasks that one may need to complete with python.

* Select 10 random images.
* Apply five to ten (minimum 5 ) image processing techniques or filters(masks) on these images.
* State the response of each filter on these images.
* Which filter will you prefer for the detect and visualization of catheters and lines in X-ray images and why?
* How can deep learning help to detect presence of catheters and lines in images and which model you prefer?( coding is not required)