## CM2003 Lab6

## Task1: pix2pix

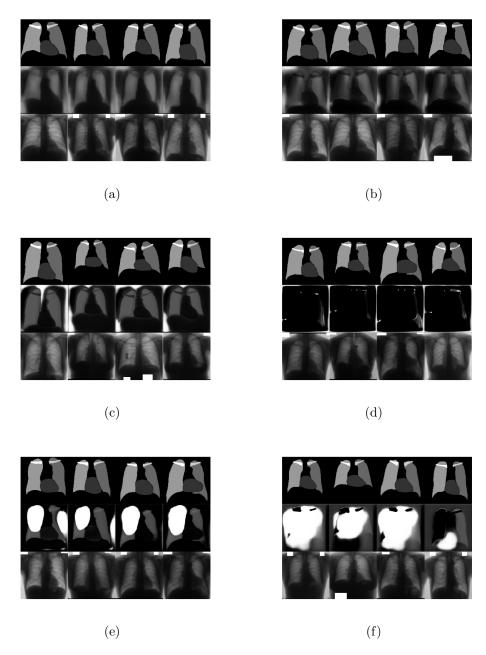


Figure 1: Training images, figure (a) with epochs 100 weight (0.5,0.5), (b) with epochs 100 weight (0.8,0.8), (c) with epochs 100 weight (1,1), (d) with epochs 100 weight (3,3), (e) with epochs 150 weight (1,1), (f) with epochs 50 weight (1,1)

From both of the training (upper figure) and validation (lower figure) pix2pix images, it can be observed that the first three pictures from top is comparatively clear than the other three. These three pictures are produces with epochs 100 and weight (0.5), (0.8,0.8), (1,1) respectively. On the other hand, the other three pictures are produced either with higher weight like (3,3) with epochs 100 or with different epochs with weight (1,1). Therefore, we can say that for the better figure the weight should be less or equal to

(1,1). Moreover, among the first training pictures, the picture (c) with eopchs 100 and weight (1,1) seems a bit higher resolution. We can see two small circles of the in the second right picture from the bottom. Therefore, we can say that among the parameters that we have chosen in this experiment, epochs 100 and weight (1,1) is the better choice.

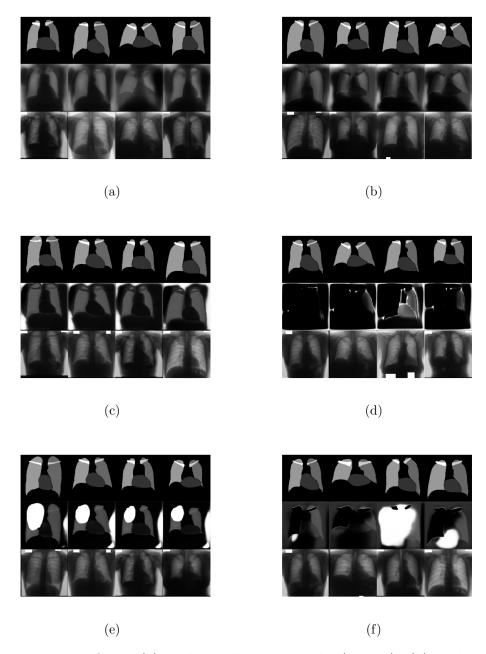


Figure 2: Validation images, figure (a) with epochs 100 weight (0.5,0.5), (b) with epochs 100 weight (0.8,0.8), (c) with epochs 100 weight (1,1), (d) with epochs 100 weight (3,3), (e) with epochs 150 weight (1,1), (f) with epochs 50 weight (1,1)

## Task 2: CycleGAN

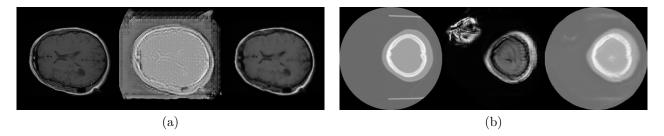


Figure 3: Default images, A2B (a), B2A (b)

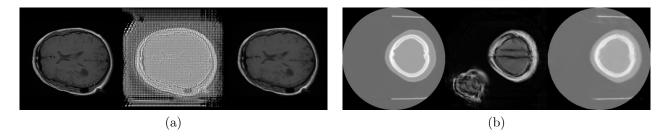


Figure 4: Images with epochs 50, A2B (a), B2A (b)

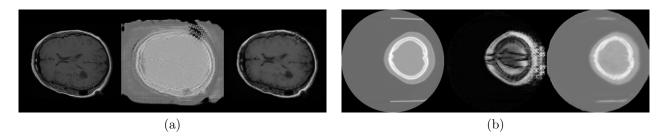


Figure 5: Images with  $\lambda 1 = \lambda 2 = 20.0$ , A2B (a), B2A (b)

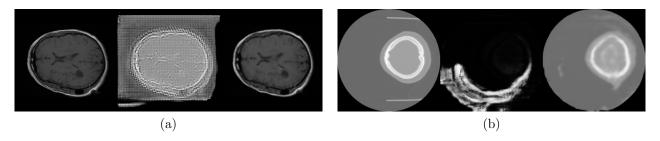


Figure 6: Images with  $\lambda d = 20$  epochs 50, A2B (a), B2A (b)

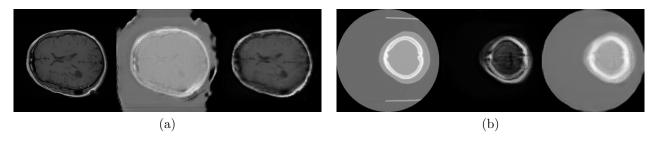


Figure 7: Images with learning rate = 2e-5 and epochs 50, A2B (a), B2A (b)