Weekly Report

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Abstract—**This week I mainly put my effort on improving deep learning methods accuracy of building extraction in SAR images.**

I. SAR CONTEST

IN this contest, we have tried both deep learning and traditional methods. From the results, we can see that deep learning methods behave better than traditional methods. So we turn to deep learning methods this week.

- As suggested by Prof.Yang, we decided to try data augmentation techniques, including random crop, flipping and rotation methods.
- To improve the number of training samples, I adopted random crop. The result shows that it has improved by 2%. The website also shows 59% F1 score.
- Then I tried flipping and rotation methods, but the result didn't exceed the original ones. I even used pix2pix GAN network, but it behaves worse than original ones.
- We need to adjust the deep CNN and use some post-process methods to refine the results.
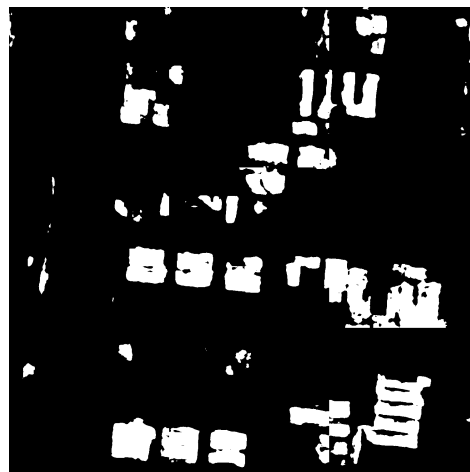
Fig. 1 is the deep learning methods result. Fig. 2 is the ground truth image.
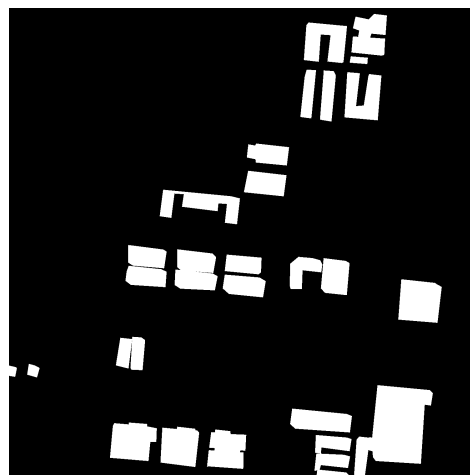

Fig. 1: CNN methods result

Fig. 2: Ground truth