Weekly Report

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Abstract—**This week I mainly put my effort on improving deep learning methods accuracy of building extraction and writing the company project application.**

I. SAR CONTEST

LAST week we tried deep learning models and post-processing methods. This week, I found that the main error may come from false positive, which reduces the precision.

- I tried to change the division of training set and validation set. Since the 10th picture contains many objects which are bright and don't belong to buildings, I add this picture to training set. The result shows about 0.5% improvement, which means this is effective.
- To get more samples, I tried the python package Augmentor. I got reduced F1 score, which was weired. This week, I checked this again and found that the reason is I didn't pair original images and ground truth images. So I corrected this and uploaded it as the second chance this week.

Fig. 1 is neural network result. Fig. 2 is the ground truth image.

II. PROJECT APPLICATION

THIS week Zhang Heng, Yu Huai and I continued to improve the company project application.

- At first, we were supposed to write a brief version of the project application. Since Yu Huai went home, Zhang Heng and I revised his part and finished the four modules.
- On the weekend, Zhang Heng and I wrote the technical routine and implementation plan. We modified original content and drawed flowcharts with Microsoft Visio. Then I handed this to Mr.Lu.
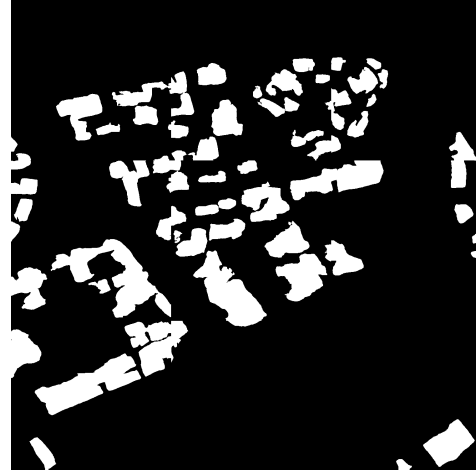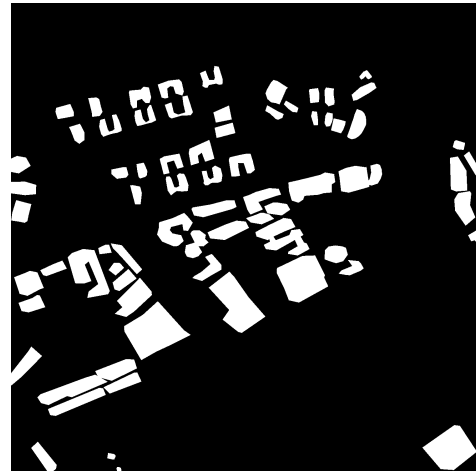

Fig. 1: Output result

Fig. 2: Ground Truth