Weekly Report

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***Abstract*—This week I mainly put my effort on integrating semantic segmentation module with our software framework and writing project requisition.**

I. Software integration

We implemented most of the state-of-the-art CNN-based semantic segmentation frameworks, including PSP Net, Refine Net, FC DenseNet, DeepLab V3, etc.

- I separated image preprocessing and post-processing from CNN training process when prototyping for semantic segmentation module. To build a more systematic software, I need to package them into one python file.
- I combined different semantic segmentation modules together. Then I added it to main framework. Fig. 1 is the overall framework. Fig. 2 is the output of semantic segmentation.

II. project requisition

We wrote a foundation application report for a remote sensing image semantic segmentation project.

- We finished the sketch in one day, but there were lots of drawbacks. As teacher said, we need to show our technical ability and emphasize that only we can take this task and finish it with high quality.
- So we adjusted the report according to teacher's opinion. We stated our method systematically and highlighted our key technique of ensemble learning. We also stressed innovation points, involving active learning and new NN framework based on several samples.
- We still need to practice more to make better project requisition.

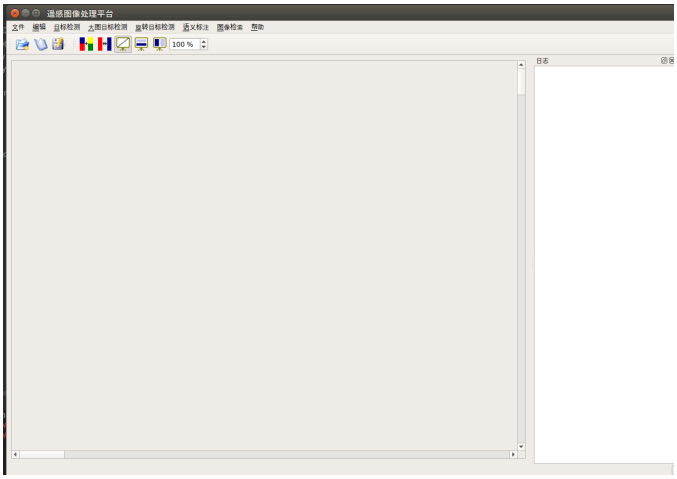

Fig. 1: Main page

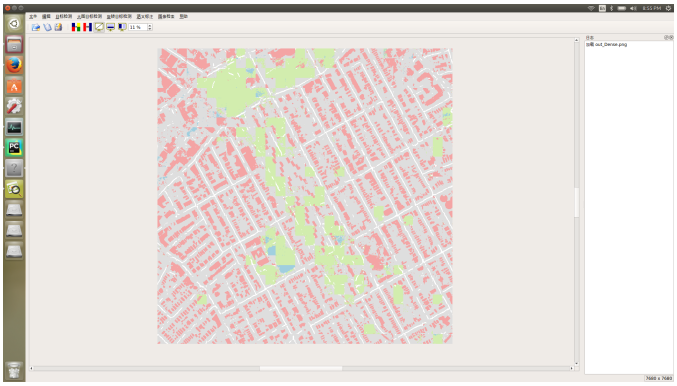

Fig. 2: Semantic segmentation module