9th place solution

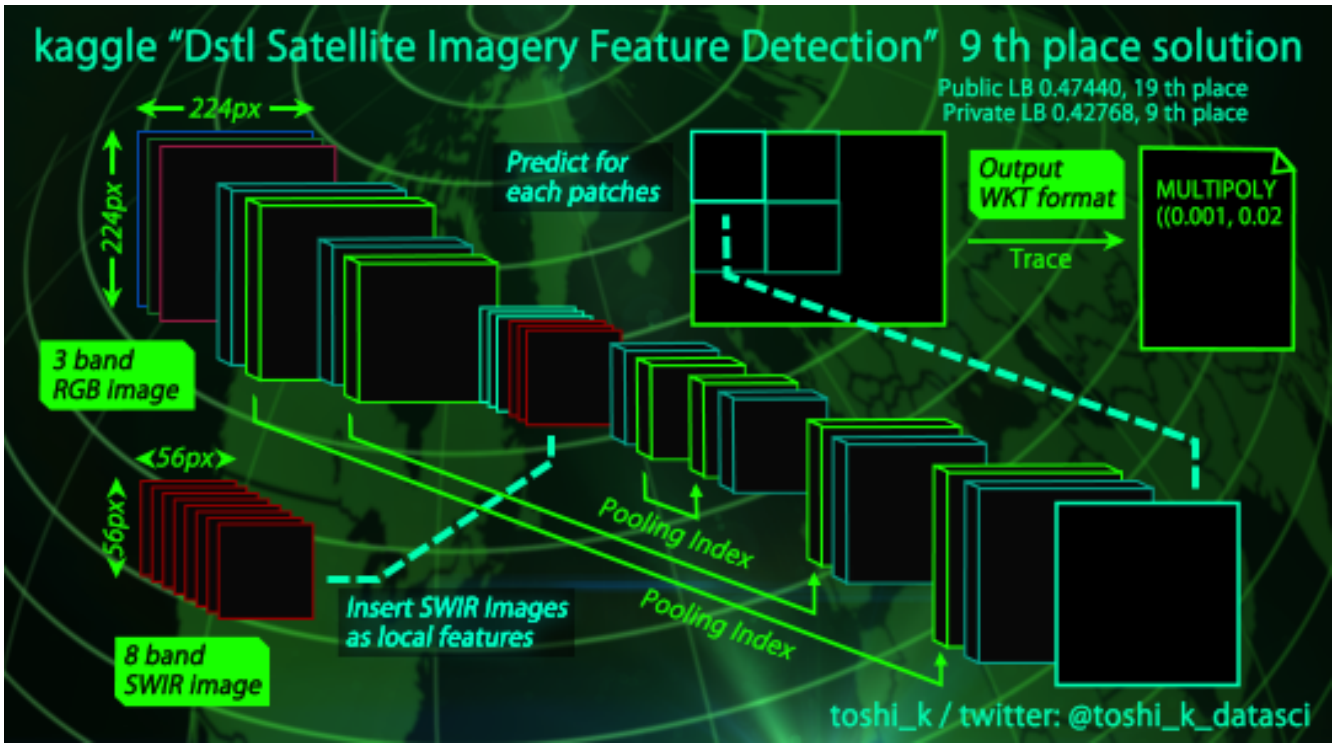
posted in Dstl Satellite Imagery Feature Detection a year ago

22

Hi Everyone,

Ending final validation, I share my solution.
I use 3 band images and SWIR images.
Main approach is Deep Learning based on SegNet (for class 1~6, 8~10).
I also use V.Osin's kaggle script (for class 7).

Code: https://github.com/toshi-k/kaggle-satellite-imagery-feature-detection



Sergey Mushi... • (3rd in this Competition) • a year ago • Options • Reply

0

How did you come with decision to use only 3-band and A-band, without M?

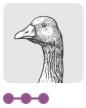
toshi_k • (9th in this Competition) • a year ago • Options • Reply

1

I think 3-band images are made from M-band. It seems to be redundant in some way.
I hear that ZFTurbo use all of them, which may improve score.
https://www.kaggle.com/c/dstl-satellite-imagery-feature-detection/discussion/29747

Sergey Mu... • (3rd in this Competition) • a year ago • Options • Reply 0

So, you just haven't tried to include M-band? For sure, 3-band made from P and M but only from small part of M (3 channels of 8). I'm asking because almost everybody seems to be using M-band to get decent results and your solution shows that you can get quite high score even without M which is interesting!



steelrose • (51st in this Competition) • a year ago • Options • Reply 0

thanks for sharing

did you have one model predicting all classes at once, or one model per class? (based on the sketch it's one model per class) also how is SegNet different to Unet? (did you try both and did Unet perform worse?)

toshi_k • (9th in this Competition) • a year ago • Options • Reply 0

I build models for each class. This enable to train models carefully for each class.
I didn't enough time to research about differences between SegNet and Unet.
You can find code of my models here.
https://github.com/toshi-k/kaggle-satellite-imagery-feature-detection/blob/master/source/02_class_1-6_8-10/2_model.lua