

Method Description for Vaihingen: 2D Labelling Challenge

Nguyen Duc Minh, Dinh Viet Sang

Laboratory of Modelling, Simulation and Optimisation,
Department of Computer Science,
School of Information and Communication Technology,
Hanoi University of Science and Technology

May, 2018

In this work, we make use of an effective deep fully-convolutional neural network with 3 skip connections ensembled for 2D Semantic Labeling Contest of Vaihingen dataset. Downsampling part is fine-tuned from pre-trained ResNet101 model with ImageNet dataset.

Throughout this challenge, we use the IRRG images, DSM data and nDSM data (supplied by Gerke). Among 16 provided tiles with ground truths, 12 them were used for training data and the rest is for validation data. Each tile is randomly crop with a uniform distribution for 4096 times and each cropped patch is left-to-right and upside down flipped. Finally, ensemble learning is applied to infer the validation tiles with the lastest 5 models. Overall accuracy reached 88.2763% for full_reference.

Paper is coming soon...