

Lung Nodule False Positive Reduction

Jack Lin – independent

cwjacklin@gmail.com

Due to system being licensed for commercial purposes, we provide limited description here.

We trained a 3D convolutional network for this classification task. Model was trained on the provided subset. Model architecture mixing multi-layers of 3D convolutions and pooling was chosen to balance modeling capacity, memory footprint and training time. We perform extensive data augmentation as well as using dropout to combat over-fitting.

We perform 10-fold cross validation using the provided subset, using only training and test set. As there was no validation set, model parameters were not optimized for the architecture insofar as training does not result in exploding gradient in the first few epochs.

For the original false positive candidates set, final result is an ensemble of 6 separately trained models, each using the same 10-fold cross validation.

For the extended false positive candidates set, final result is from a single model.