False Positive Reduction for Lung Nodule Detection

Our model is mainly based on 3D deep convolutional neural networks(3D-DCNN). We tried multiple network structures with both 3D and 2D convolutions, and found that 3D convolution is marginally better than 2D counterpart. We believe it is because 3D convolutions can better capture the pattern and context information in CT images. The architecture of the network is determined by trail-and-error. Also, we apply heavy augmentation and detailed tuning of the data preprocessing to address the class imbalance problem. The model is evaluated with 10-fold cross-validation on the provided extended candidates. For detailed description please refer to http://www.cis.pku.edu.cn/faculty/vision/wangliwei/software.html.