Some idea

1.

Do Pneumonia prediction first, and then draw the bounding box on those predicted patients.

Prediction is binary classification so we can try models like:

Random forest

Logistic regression

FNN

Bounding box:

Deep learning

2.

Just train with bounding box picture (only patient has the bounding box) with other random bounding boxes (need to define how to choose the random bounding box)

Random bounding box criteria:

Choose within the lung boundary (need to have a way to segment the lung image nicely)

Need to determine the size (maybe just choose the most common aspect ratio and pixel area from the established bounding box?)

3.

用inception net的别人train好的去试试, 只要改后面的embedding和softmax就可以了->可以考虑keras的InceptionResNetV2

Residual net 150层还没有vanishing gradient的问题, 因为有highway的缘故