My name is Ryan Wang, I ‘ll talk about our model.

First, we perform data augmentation in order to prevent overfitting.

We use two different network structures, the first one is Simple CNN. we construct 4 convolutional layers and 3 dense layers.

Our second model is Xception network. We maintain the 36 convolutional layers in the original paper. In the end, we add 3 dense layers in order to transfer the network into solving our classification problem.

Our intuitive idea of using Xception model comes from two great parts of Xception network. The first is that it uses 1 by 1 convolution to reduce the channel size.

The second is that it contains a structure called the Inception block so that it can extract multiple features in one layer.

As for the training process. Both models use a loss function of crossentropy and optimizer of adam

We build a customized earlystopping function that select the average of categorical accuracy + recall rate of pneumonia + recall rate of viral pneumonia and recall rate of normal people

We set patience to 5 and epoch to 30 after tuning parameters.