RNN：

Perfect data

epoch=list(1,2,3,4,5,6,7,8,9,10)

trainingaccuracy=list (0.7984, 0.9513, 0.9790, 0.9873, 0.9902, 0.9922, 0.9933, 0.9952, 0.9940, 0.9958)

plot(epoch,trainingaccuracy,type="l",col="red",ylab="accuracy")

validationaccuracy=list(0.5750, 0.9870, 0.9950, 0.9880, 0.9900, 0.9940, 0.9910, 0.9970, 0.9870, 0.9970)

lines(epoch,validationaccuracy,type="l",col="blue")

epoch=list(1,2,3,4,5,6,7,8,9,10)

trainingloss=list (0.4128, 0.1419, 0.0744, 0.0463, 0.0400, 0.0327, 0.0292, 0.0212, 0.0280, 0.0196)

plot(epoch,trainingloss,type="l",col="red",ylab="loss")

validationloss=list(1.0472, 0.0376, 0.0171, 0.0524, 0.0347, 0.0154, 0.0171, 0.0157, 0.0635, 0.0146)

lines(epoch,validationloss,type="l",col="blue")

Imperfect data:

epoch=list(1,2,3,4,5,6,7,8,9,10)

trainingaccuracy=list (0.8160, 0.9604, 0.9660, 0.9692, 0.9676, 0.9706, 0.9724, 0.9734, 0.9729, 0.9731)

plot(epoch,trainingaccuracy,type="l",col="red",ylab="accuracy",ylim=c(0.8,1))

validationaccuracy=list(0.9733, 0.9813, 0.9767, 0.9880, 0.9880, 0.9840, 0.9867, 0.9887, 0.9920, 0.9880)

lines(epoch,validationaccuracy,type="l",col="blue")

epoch=list(1,2,3,4,5,6,7,8,9,10)

trainingloss=list (0.4129, 0.1575,0.1438, 0.1365, 0.1409, 0.1318, 0.1282, 0.1264, 0.1260, 0.1266)

plot(epoch,trainingloss,type="l",col="red",ylab="loss",ylim=c(0,0.42))

validationloss=list(0.1064, 0.0963, 0.0894, 0.0669, 0.0633, 0.0782, 0.0650, 0.0625, 0.0556, 0.0631)

lines(epoch,validationloss,type="l",col="blue")

CNN：

Perfect data:

epoch=list(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20)

trainingaccuracy=list (0.5084, 0.8299, 0.9745, 0.9773, 0.9815, 0.9813, 0.9812, 0.9848, 0.9878, 0.9884, 0.9895, 0.9895, 0.9905, 0.9911, 0.9913, 0.9916, 0.9925, 0.9926, 0.9926, 0.9916)

plot(epoch,trainingaccuracy,type="l",col="red",ylab="accuracy")

validationaccuracy=list(0.5000, 0.9650, 0.9590, 0.9750, 0.9830, 0.9790, 0.9780, 0.9830, 0.9820, 0.9810, 0.9860, 0.9830, 0.9770, 0.9890, 0.9900, 0.9860, 0.9850, 0.9910, 0.9770, 0.9890)

lines(epoch,validationaccuracy,type="l",col="blue")

epoch=list(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20)

trainingloss=list (0.6928, 0.3585, 0.0833, 0.0758, 0.0664, 0.0661, 0.0664, 0.0571, 0.0434, 0.0430, 0.0386, 0.0360, 0.0329, 0.0313, 0.0308, 0.0307, 0.0287, 0.0267, 0.0273, 0.0282)

plot(epoch,trainingloss,type="l",col="red",ylab="loss")

validationloss=list(0.6885, 0.0917, 0.1108, 0.0700, 0.0578, 0.0912, 0.0731, 0.0463, 0.0529, 0.0788, 0.0482, 0.0523, 0.0650, 0.0385, 0.0370, 0.0398, 0.0524, 0.0318, 0.0694, 0.0447)

lines(epoch,validationloss,type="l",col="blue")

imperfect data:

epoch=list(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20)

trainingaccuracy=list (0.7384, 0.9630, 0.9744, 0.9790, 0.9821, 0.9844, 0.9849, 0.9866, 0.9866, 0.9867, 0.9882, 0.9875, 0.9892, 0.9888, 0.9885, 0.9893, 0.9886, 0.9896, 0.9898, 0.9894)

plot(epoch,trainingaccuracy,type="l",col="red",ylab="accuracy")

validationaccuracy=list(0.9520, 0.9627, 0.9707, 0.9767, 0.9613, 0.9720, 0.9780, 0.9727, 0.9773, 0.9773, 0.9780, 0.9800, 0.9700, 0.9760, 0.9827, 0.9813, 0.9767, 0.9753, 0.9773, 0.9807)

lines(epoch,validationaccuracy,type="l",col="blue")