1. This paper draws on the training method of Recurrent Neural Network (RNN), By increasing the number of hidden layers of RNN and changing the layer activation function from traditional Sigmoid to Leaky ReLU on the input layer , the first group and the last set of data are zero-padded to enhance the effective utilization of data such that the improved reduction model of Denoise Recurrent Neural Network (DRNN) with high calculation speed and good convergence is constructed to solve the problem of low speaker recognition rate in noisy environment.
2. The research shows that the improved model can effectively eliminate the noise of the feature parameters and improve the speech recognition rate. When the signal-to-noise ratio is low, the speaker recognition rate can be more obvious.
3. when the signal-to-noise ratio is 0dB, the speaker recognition rate of people is increased by 40%, which can be 85% improved compared with the traditional speech model.
4. with the increase in the signal-to-noise ratio, the recognition rate is gradually increased. When the signal-to-noise ratio is 15dB, the recognition rate of speakers is 93%.