

Course: CS131 Artificial Intelligence

Assignment: Artificial Neural Networks

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Design Part:

Make sure the program is in the same folder as ANN - Iris data.txt before running it.

I import the data and split it into two parts during data preprocessing. Since, I think the data set we have is not too large, I use 60% of them as the training data, 20% as validation data, and 20% as testing data.

Then I use neural network forward and backward propagation to implement iris recognition.

During the training process, the accuracy and validation value of each iteration will be printed.

Because the weights between neurons and bias, neurons and neurons are generated at random, the overall accuracy may change when the ANN is restarted.

The best learning rate value is 0.1. And the maximum number of iterations is set to 1000. The training phase will end once the condition is met.

Test Part:

The gardener will be asked to provide all of the necessary information, including sepal length, sepal width, petal length, and petal width, and the program will respond with a predicted Iris class.

Input 'stop' to terminate the program.