patternnet

Pattern recognition network

Syntax

```
patternnet(hiddenSizes,trainFcn,performFcn)
```

Description

Pattern recognition networks are feedforward networks that can be trained to classify inputs according to target classes. The target data for pattern recognition networks should consist of vectors of all zero values except for a 1 in element `i`, where `i` is the class they are to represent.

`patternnet(hiddenSizes,trainFcn,performFcn)` takes these arguments,

`hiddenSizes`	Row vector of one or more hidden layer sizes (default = 10)
`trainFcn`	Training function (default = `'trainscg'`)
`performFcn`	Performance function (default = `'crossentropy'`)

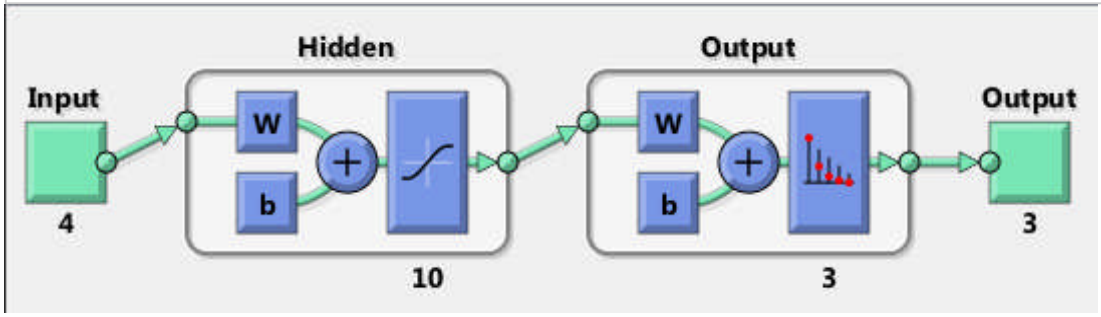
and returns a pattern recognition neural network.

Examples

Pattern Recognition

This example shows how to design a pattern recognition network to classify iris flowers.

```
[x,t] = iris_dataset;
net = patternnet(10);
net = train(net,x,t);
view(net)
y = net(x);
perf = perform(net,t,y);
classes = vec2ind(y);
```



More About

- Classify Patterns with a Neural Network

- Neural Network Object Properties
- Neural Network Subobject Properties

See Also

`competlayer` | `lvqnet` | `network` | `nprtool` | `selforgmap`

Introduced in R2010b