

Note on Learning Neural Network

Wantee Wang

2015-03-11 16:54:37 +0800

This is a paper about back-propagation algorithm for Neural Network.

The table of contents is

- 1 Preliminary
 - 1.1 Non-linear function
 - 1.1.1 Sigmoid
 - 1.1.2 Hyperbolic tangent
 - 1.1.3 Softmax
 - 1.2 Cross entropy
 - 1.3 Gradient descent
 - 1.3.1 Batch Gradient Descent
 - 1.3.2 Stochastic Gradient Descent
 - 1.4 The Multivariable Chain Rule
 - 1.5 Network architecture
- 2 Feed-forward Network
 - 2.1 Forward pass
 - 2.2 Backpropagation
 - 2.2.1 Weight between hidden layer and output layer
 - 2.2.2 Weight between input layer and hidden layer
- 3 Recurrent Neural Network
 - 3.1 Forward pass
 - 3.2 Backpropagation
 - 3.2.1 Real-Time Recurrent Learning
 - 3.2.2 Backpropagation Through Time

The pdf version is in [this link](#).

<http://wantee.github.io/2015/03/11/note-on-learning-neural-network/>