

BackPropEngine

INHERITS FROM	Object
DECLARED IN	BackPropEngine.h

CLASS DESCRIPTION

This class implements a feed-forward network that updates it's weights using the Error Back-propagation algorithm.

INSTANCE VARIABLES

<i>Inherited from Object</i>	Class	isa;
<i>Declared in BackPropEngine</i>	id	inputs;
	id	hidden;
	id	outputs;
	float	ETA;
	float	ALPHA;
inputs	a List of the input Neurons	
hidden	a List of the hidden layer Neurons	
outputs	a List of the output Neurons	
ETA	the learning-rate	
ALPHA	the momentum-term (<i>not used</i>)	

METHOD TYPES

Initializing a new instance	\pm init \pm initWithInputs:hidden:outputs:
Running the algorithm	\pm applyInput: \pm correctWithTarget:
Getting parameters	\pm inputs \pm hidden \pm outputs

INSTANCE METHODS

applyInput:

- **applyInput:**(double *)*input*

Feeds the input vector pointed to by *input* forward through the BP network.

correctWithTarget:

- **correctWithTarget:**(double *)*target*

Modifies the weights of the BP network by comparing the current output to the target vector *target*. This assumes that you have used the **applyInput:** method to feed-forward an input vector.

See also: - **applyInput:**

hidden

- **hidden**

Returns a pointer to the receivers list of hidden Neurons.

init

- **init**

Initializes the receiver. This should not be called directly. Use **initWithInputs:hidden:outputs:** to initialize a new **BackPropEngine**.

See also: ± **initWithInputs:hidden:outputs:**

initWithInputs:hidden:outputs:

- **initWithInputs:(int)*Nin* hidden:(int)*Nhid* outputs:(int)*Nout***

Initializes the receiver creating a feed-forward BP network with *Nin* inputs, *Nhid* hidden nodes and *Nout* outputs.

See also: - **init**

inputs

- **inputs**

Returns a pointer to the receivers list of input Neurons.

outputs

- **outputs**

Returns a pointer to the receivers list of output Neurons.