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

Inherited from Object	Class	isa;
Declared in BackPropEngine	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 *(not used)*

METHOD TYPES

   Initializing a new instance   ± init
                                              ± initWithInputs:hidden:outputs:

   Running the algorithm   ± applyInput:
                                              ± correctWithTarget:

   Getting parameters   ± inputs
                                              ± hidden
                                              ± 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.