seadiver

Official Documentation

ver 0.1.7

seadiver.model

class **ANN** (input_shape, structure, output, activation= "sigmoid", loss = "auto", initializer = "auto", strict=False, delta=1e-7)

Attributes

Name	Type	Description
w_layers	list	weights
b_layers	list	biases
activations	list	activation function names
input_shape	tuple	the shape of a single input data
initializer	String	the type of the initializer
output	String	the type of the output function
loss	String	the type of the loss function
structure	tuple	the number of neurons in each layer
strict	boolean	whether to apply strict arithmetic calculations (for 'softmax' layer)
delta	float	a small number for preventing "division-by-zero" error
w_gradients	list	the most recent gradients for weight layers
b_gradients	list	the most recent gradients for bias layers
fan_ins	list	the most recent affine results
fan_outs	list	the most recent activation results
error_log	list	the most recent error_log

Method

Name	Arguments	Return	Description

describe()			prints model information
params()			prints a list of compatible parameters
forward()	x, t, display=False	out, error, batch_size	forward propagation and loss calculation
backward()	y, t, batch_size, display = False	w_gradients, b_gradients	backward propagation
train()	x, t, learning_rate, iteration, save_log=False, flush_log=True, display=True, error_round=10		trains a model
predict()	x	out	returns forward propagation output
export()	directory=r “.”, file_name="model.json"		saves the object in ‘.json’ format.
vis_error_log()			draw a lineplot with the ‘error_log’
vis_inner_dist()			draw a histogram of the model’s inner distribution per layer

Methods

Name	Arguments	Returns	Description
make()	file		creates a model from a .json file