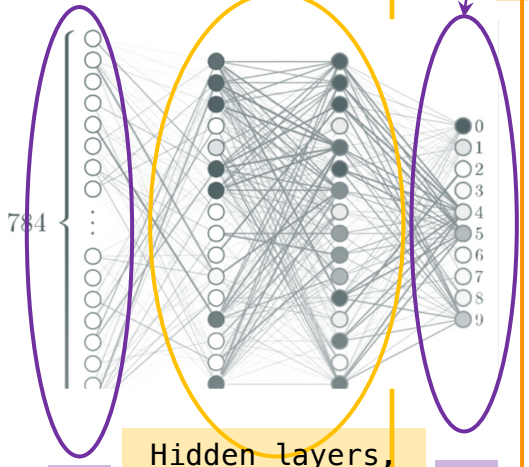
class NeuralNetwork

1 __init__



X

Hidden layers, neurons, activations

Y

alpha, eta0
batch_size
n_epochs
opt
b1 b2 t1
penality lmd

2 fit(X,Y) ← (X_train, Y_train)

init_parameters(X,Y)

train(X,Y)

SGD

Loop over epochs:

Loop in within minibatches:

1. feed_forward(X_batch)
   → AL, cache
2. compute_cost(AL, Y_batch)
   → **costs**
3. back_propagation(AL, Y_batch, cache)
   → grads
4. learning_rate (X_batch, t)
   → eta
5. update_opt_parameters(grads, eta)
   → **parameters**

ACTIVATIONS

class activations

ETAS_TYPES

OPTIMIZERS

3 predict(X) ← (X_test)

Y