Hyperparameter tuning

Tuning process

deeplearning.ai

Hyperparameters

$\rightarrow$ $\boxed{\alpha}$

$\boxed{\beta}$ NO.9

$$\beta_1, \beta_2, \varepsilon$$
$$0.9 \quad 0.999 \quad 10^{-8}$$

$\boxed{\text{\# layers}}$

$\boxed{\text{\#hidden units}}$

$\boxed{\text{learning rate decay}}$

$\boxed{\text{mini-batch size}}$
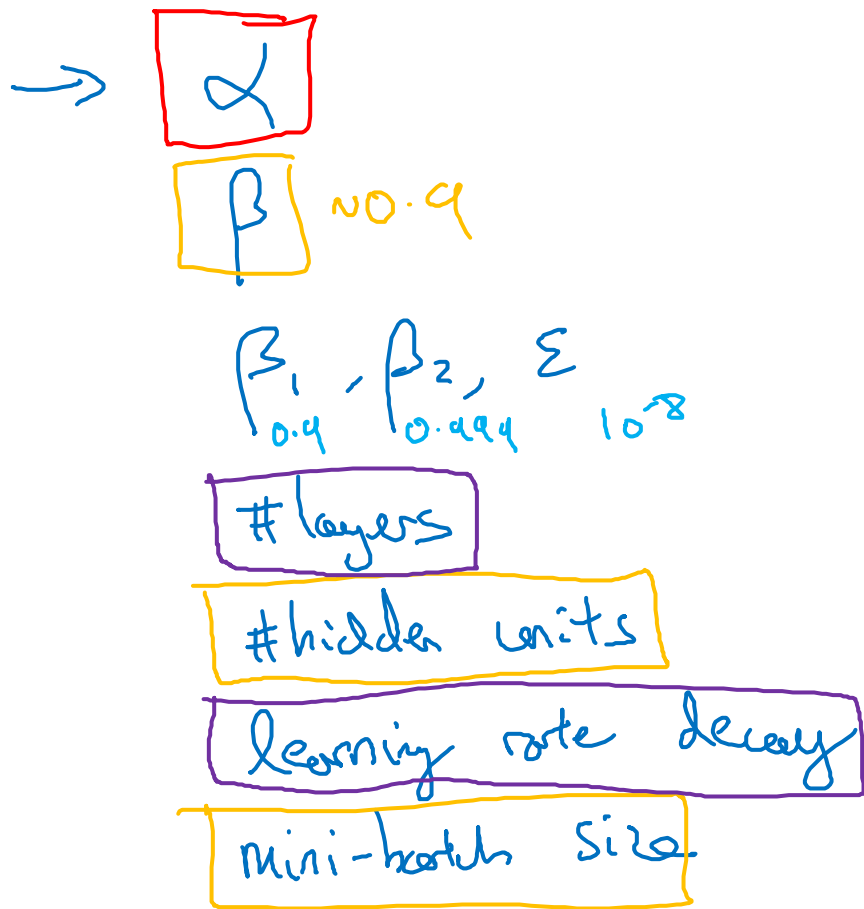
Possible hyperparameters that we need to tune including the following: learning rate alpha

beta parameter in the exponentially weighted moving average

beta_1, beta_2, epsilon in the Adam Optimization Algorithm, beta_1 in the exponentially weighted moving average, beta_2 in the RMSprop Optimization algorithm
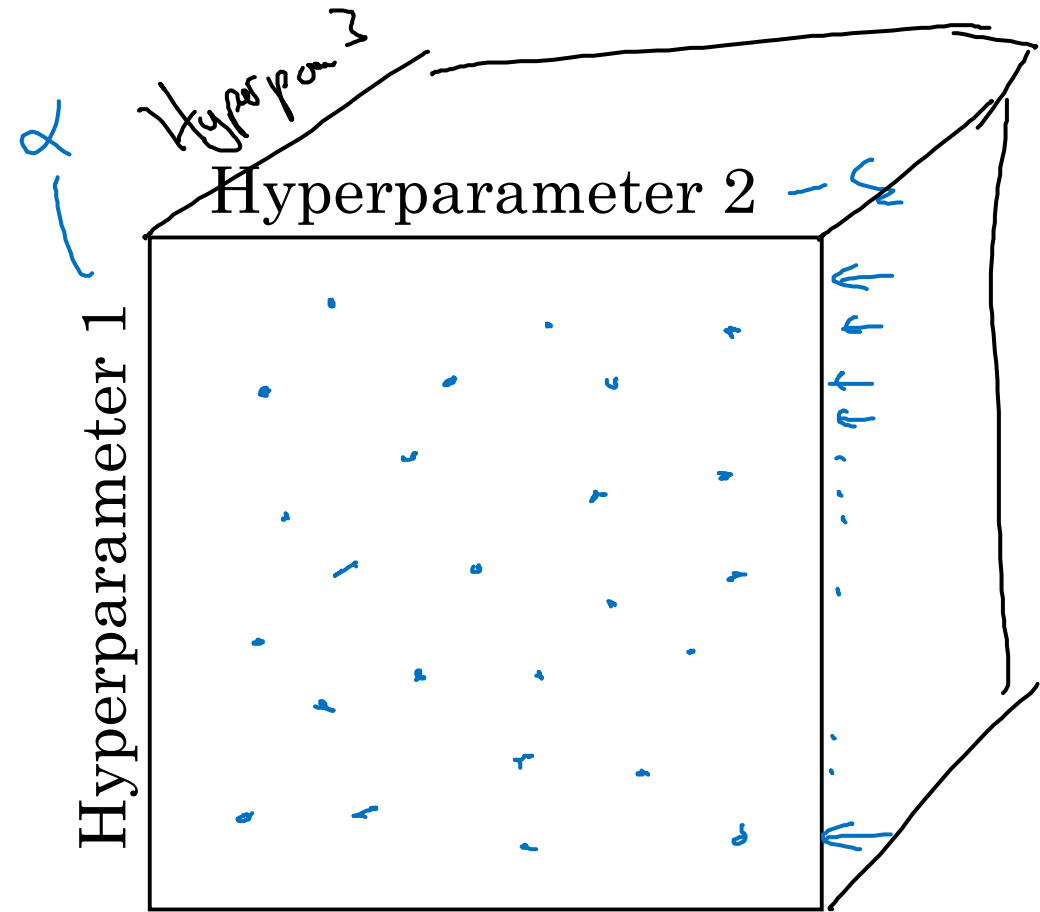
Number of layers in the Neural Network, number of hidden units in each hidden layer in the Neural Network

How learning rate decays, the mini-batch size

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Try random values: Don't use a grid
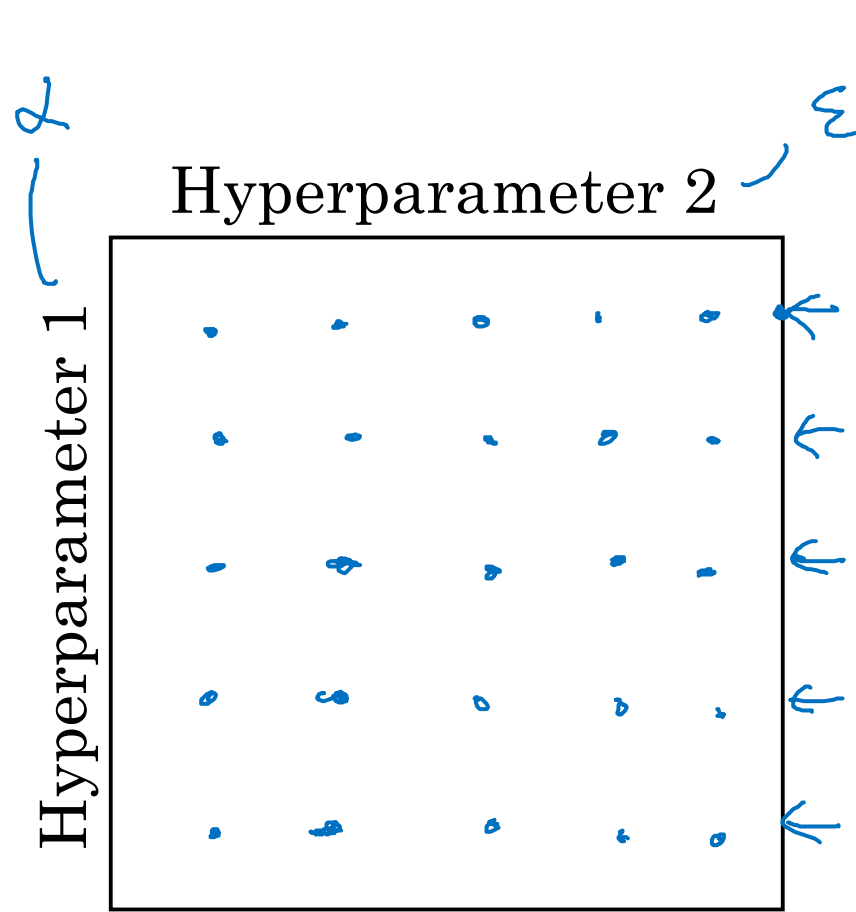
Here, using the grid_search will decrease the amount of values you can attempt in both dimensions.

Hence, randomization should instead be used.

Coarse to fine

Hyperparameter 2

Hyperparameter 1

Coarse to fine, gradually zoom-in.

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