# AA 222 Final Project Tasks

1. Tuning the hyperparameters of the cross-entropy method (line 235)
   1. To evaluate performance a metric must be selected that can quickly compare various hyperparameters
   2. Hyperparameters that need tuning:
      1. m: sample size
      2. m\_elite: elite sample size
      3. rho: penalty weight
      4. gamma: penalty multiplier
      5. tol: tolerance at which to stop
2. Model selection in the Radial Basis Function fitting (lines 115-116)

<https://docs.scipy.org/doc/scipy/reference/generated/scipy.interpolate.Rbf.html>

* 1. Evaluating the various radial basis functions:
     1. Gaussian, Linear, Inverse etc.
  2. Tuning the RBF hyperparameters:
     1. Epsilon and Smooth

1. Implementing bootstrap method for determining the training and validation sets and extracting a generalization error mean and standard deviation (lines 26-53)