Machine Learning

Quiz 8

Student Name: _____

1. (1 point) What is the minimum performance required from a weak learner in AdaBoost?

2. (1 point) How does AdaBoost achieve diversity among its constituent weak learners?

3. (1 point) Is $k_1(\mathbf{x}, \mathbf{y}) := (\mathbf{x}^T\mathbf{y} + 2)^2$ a valid kernel?

4. (1 point) How about $k_2(\mathbf{x}, \mathbf{y}) := (\mathbf{x}^T\mathbf{y} - 2)^2$?

5. (1 point) Jeopardy!

   "A distribution over functions $f(\mathbf{x})$, such that for any finite set of samples $\{\mathbf{x}_n\}_{n=1}^N$
   the joint distribution of function values $\mathbf{f}$, $f_n = f(\mathbf{x}_n)$, is Gaussian: $p(\mathbf{f}) = \mathcal{N}(\mathbf{f} \mid 0, \mathbf{K})$."

   What is...