24-787: Machine Learning and Artificial Intelligence for Engineers

Ryan Wu

ID: weihuanw

Homework 4

Due: Feb 17 2024

**Concept Questions:**

Problem 1

Model 2 represents a better discriminator because the margin’s width is maximized.

Problem 2

G should be formulated as option 4 (G = -y\*[x1,x2,1], h = -1).

Problem 3

Model 1 will be faster to evaluate a set of 1000 test points.

Problem 4

The RBF SVM model classifies the data best.

Problem 5

One-versus-one classifier would be faster to train.

Problem 6

For the given model, 4 data points contribute to the loss L.