

COMS 474
Homework 7

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Problem 1

[30 points]

For this problem you will fit classifiers to three simple data-sets and visually examine the classification boundaries

A

Copy of Plot

B

Based on discussions in lecture, which methods do you expect to fit models that would result in linear decision boundaries? Was that the case? Briefly describe whether the methods that have linear boundaries appear to find the same/similar/different boundaries.

C

Repeat the same for methods known to have boundaries defined by quadratic equations.

D

For methods whose boundaries can be non-linear, do they appear linear for the "linearly separable" data set?

E

How do LDA and QDA compare for these data sets?

F

How do the different support vector methods compare?