Machine Learning Algorithms: From Math to Code
Assignment for Support Vector Machine

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1 Ch14.m

Apply Support Vector Machine (SVM, Section 14.1) to the dataset generated by `[X,y]=myData` in Ch14.m, where you need to solve a QP problem with the interior point method (Section 3.7). Complete the missing code and add appropriate comments (to key steps and formulas of the algorithm) for Ch14.m, and submit it with a report describing your results in a compressed .zip file on canvas.

After you finish Ch14.m, you should get the following output in command line (or something similar), and a plot will be shown by matlab (see Figure 1).

```
>> Ch14
Support vectors:
1 alpha=0.52 x=[4.43,2.44] y=-1
2 alpha=3.11 x=[1.17,0.74] y=-1
3 alpha=3.64 x=[1.30,1.64] y=1
w = [-1.25,2.39], b = -1.31
```

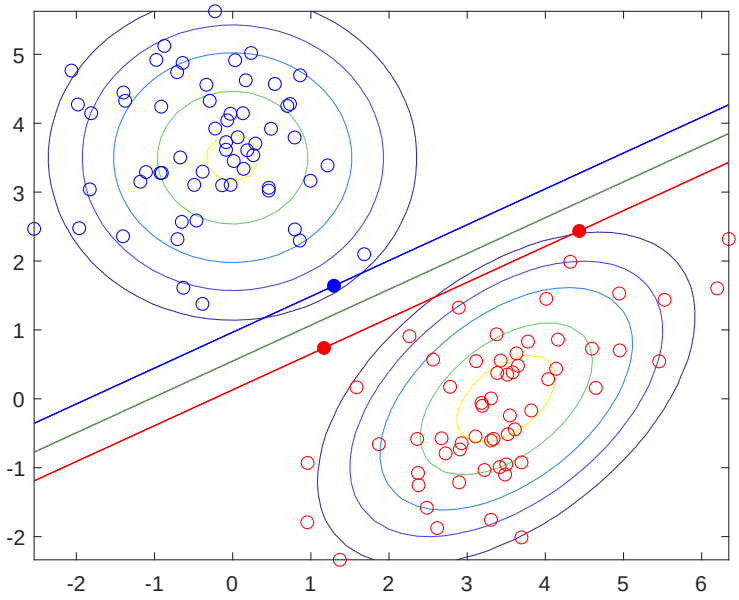

Figure 1: A Simple Example of Binary Classification by SVM

In the report, you should

1. Include generated plot in your report.
2. Include output in command line.

Notes

- Source code and report should be compressed into a single .zip file named **Group_xx.zip** and handed on canvas before **next monday midnight, July 17 23:59**.