

Problem 1:

Avg Accuracy over 10 training trials with random indices for 60% train data and 40% test data:

-without data normalization: 0.7496875

-with data normalization: 0.74875

For the data in part two no preprocessing is needed ,neither missing values or outliers nor categorical features .

Normalization is often used in preprocessing of data, for example, assume your input dataset contains one column with values ranging from 0 to 1, and another column with values ranging from 10,000 to 100,000. The great difference in the *scale* of the numbers could cause problems when you attempt to combine the values as features during modeling.

Normalization with SVM is one of important procedures as SVM assume that the data it works with is in a standard range.

The average accuracy is almost the same in both approaches ,I think this is because there are many features that initially ranging from 0 to1 and the other features are not of very high different range ~~that~~ those low valued features (approximately scaled).
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