

Red wine:

Partition	Logistic regression		SVM	
	Time (s)	Accuracy	Time	Accuracy
1	2.34	0.796875	0.41	0.765625
2	2.30	0.84375	0.38	0.84375
3	2.31	0.734375	0.37	0.765625
4	2.36	0.71875	0.39	0.71875
5	1.8	0.8125	0.32	0.734375
Average	2.222	0.78	0.374	0.76

White wine:

Partition	Logistic regression		SVM	
	Time (s)	Accuracy	Time	Accuracy
1	40.0	0.7398	0.52	0.72959
2	41.2	0.7602	0.54	0.75
3	39.8	0.71939	0.55	0.72449
4	40.3	0.7704	0.52	0.77551
5	28.6	0.7908	0.40	0.7653
Average	37.98	0.76	0.506	0.746

The 5 partitions were made using `np.array_split(array)` to split the training and testing arrays for x and y into 5 new arrays.

For both types of wine, classification using logistic regression had a higher accuracy than SVM. Looking at the predicted values, SVM failed to predict a class different than class 1, which was the most common class, while the logistic regressor was able to identify different classes. On the other side, logistic regression took a longer time to run, which can be explained because of the 2D grid search that needed to be done at the beginning to find alpha and lambda. Both methods were used to build 3 classifiers (class 0 vs the rest, class 1 vs the rest, class 2 vs the rest), and then 3 predictions were made for each sample and the one with higher probability was added to the final predicted array.

All in all, logistic regression had a better performance than SVM in terms of accuracy, but at the cost of taking a longer time to run.