On the initial small datasets through forward search I was able to attain the results of feature set {5, 3} to have the best accuracy of 0.92. However, when I conducted backward search I was attained the feature set {5, 7, 10, 2} with an accuracy of 0.83. Both my results differ from the given result which is to be an accuracy of 0.89 with feature sets {5, 7, 3}. My forward algorithm was able to achieve a better accuracy then the given therefore it is ok. On the other hand, my backward algorithm achieved a lower accuracy then the given and my forward. This is probably due to it being stuck on a local maximum while doing the backward search.

On the initial large datasets through forward search I was able to attain the results of feature set {27, 1} to have the best accuracy of 0.955. On the backward search I was attained the feature set {27} with an accuracy of 0.847. Both my results differ from the given result which is to be an accuracy of 0.949 with feature sets {27, 15, 1}. My forward algorithm was able to achieve a better accuracy than the given by .006 more percent, while the backward algorithm achieved a worse accuracy than that of the given. On the other hand, both of the algorithms were able to match the 27 part of the feature set and the forward algorithm was able to match the 27 and 1. The inability of my backward algorithm to match the given result is because it was caught in a local maximum.

For my personal small dataset my forward algorithm was able to find the best feature set of {10, 3} with an accuracy of 0.92. The backward algorithm also found its best feature set to be {10, 3} with an accuracy of 0.92. From this I can conclude that both of my results were able to find the local maximum or that they were able to find the true maximum of this feature set.

For the personal large dataset my forward algorithm was able to find the feature set of {24, 15} with an accuracy of 0.956. The backwards algorithm attained a worse feature set of {24, 21} with an accuracy of 0.835. This leads to the fact that my backwards algorithm was once again stuck in a local maximum less than that of the maximum the forward algorithm was able to find.

From the results of the data sets that I tested my Feature selection function on it led to the fact that the forward algorithm would usually lead to better accuracy. However, the accuracy of the backwards algorithm was also not too bad. All in all both algorithms led to pretty accurate features to be selected for classifying my data, and would have at least one feature to be the same from those that it chose for the best feature set except for my personal large dataset. Both algorithms are not guaranteed to find the true maximum since they are greedy algorithms which do not search extensively to find the optimal solution.