Problem 1 (5/5):

Good explanation of the cost function and approach to solving. The author demonstrated a clear understanding of the results and cause of errors seen among the data sets and a thoroughly documented investigation of the effects of the regularize value. The graphs and tables clearly depict and identify trends. The author also demonstrates further knowledge by implementing feature selection to better solve the problem with asymmetry.

Problem 2(5/5):

Again there was a good explanation of the problem faced and the author detailed the problem set up well with the simple example given. A little more detail could have been specified on the meaning of the margin and what a support vector is. However, again the results where clearly depicted and analyzed. There was a thorough discussion of the meaning of the parameter C is. The Gaussian kernel was successful in achieving improved results and the author performed a thorough search to select the optimal choice of C, and beta.

Problem 3(5/5)

The author is clear and concise in demonstrating the results on the Titanic data set. The use of feature scaling was nice but the author did not provide intuition as to why it was necessary or useful for this data set. However, the optimal hyperparameter search was again thorough and the results correctly identify the most significant features. The author also provided a nice discussion of the relative merits of each method for this particular problem.