# Assignment 1 – SENG 474

## **Logistic Regression**

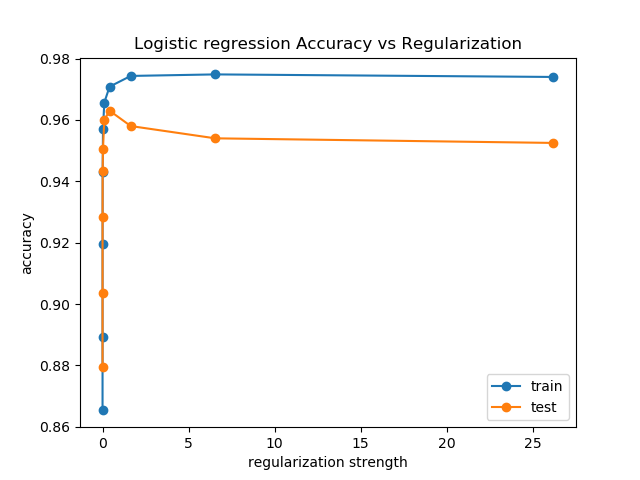
The task for logistic regression was to find a regularization strength *C* the has the best test accuracy/least test error. To do this the following formula was used:

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Where *C*0 = 0.0001; α = 4; and 0 ≤ *i* < 10

This produced values of *C* ranging from 0.0001 to 26.2. *C*=0.4096 (*I* = 6) was the most accurate with . See figure 1 below for a comparison of *C* and the respective accuracy

Figure 1 – Logistic Regression Test Accuracy



## **Support Vector Machines**

## **K-Fold Cross-Validation**

## **Gaussian Kernel**