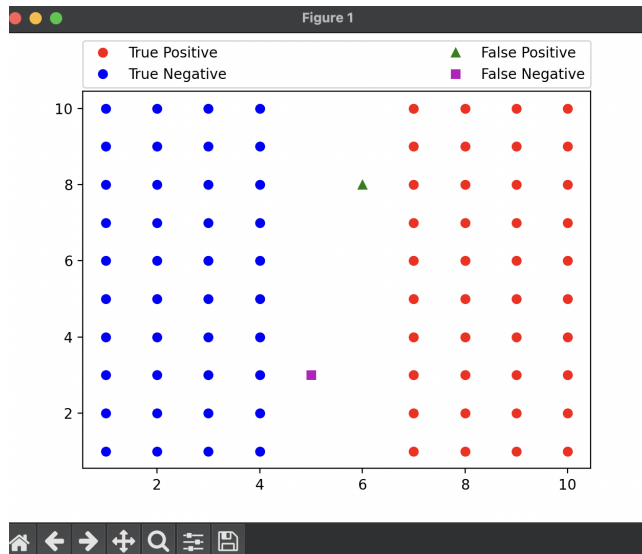
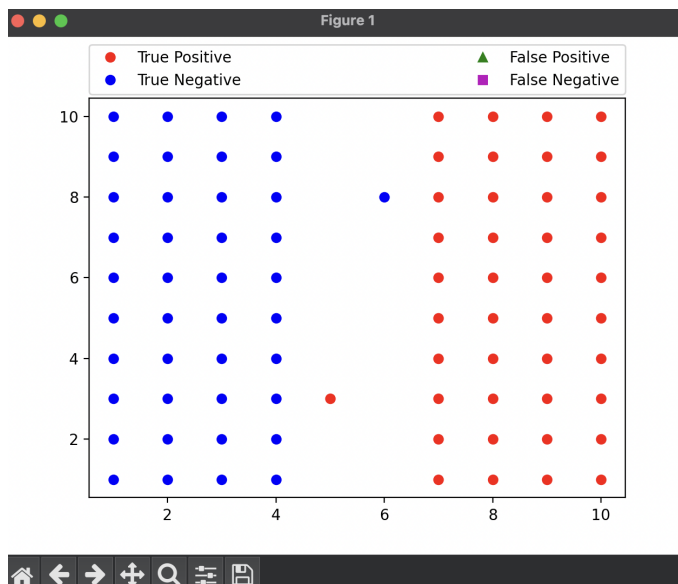


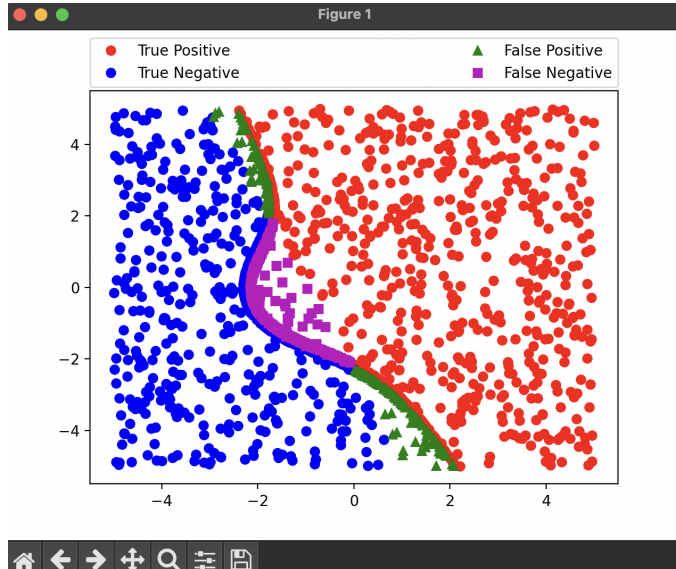
Question 3 C = 1



Question 3 C =3

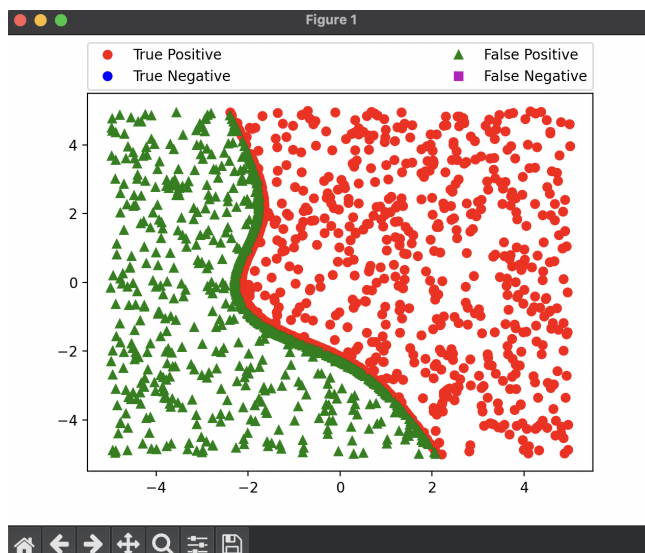


Question 4 Linear Kernel



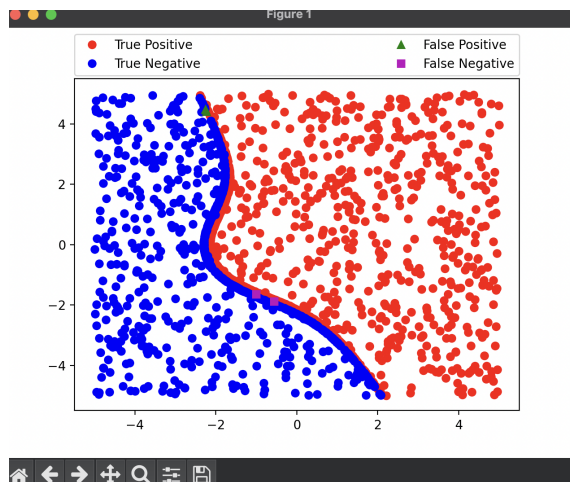
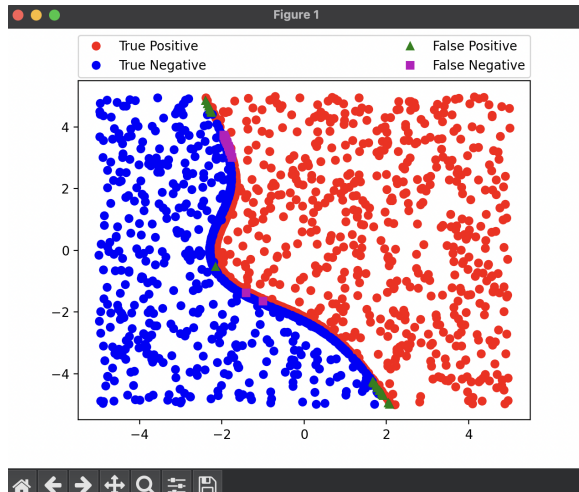
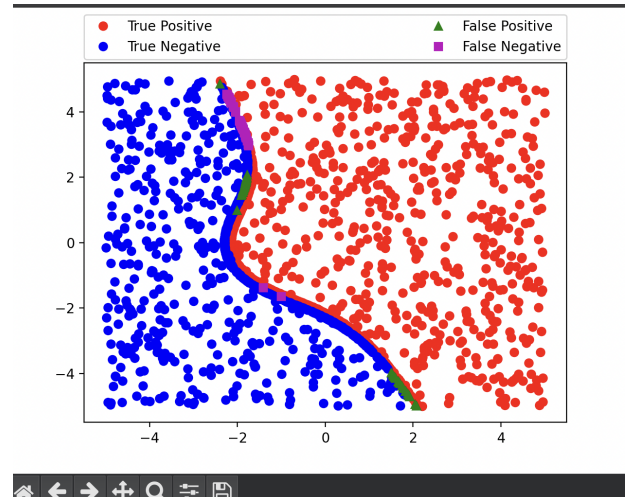
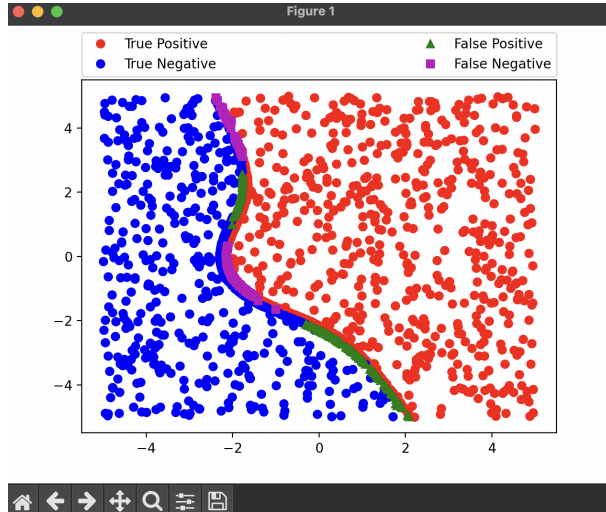
- Here we can observe false positives and false negatives along the separator, we can also observe that the separator was potentially overfit to the data as there are a large pocket of false positives along the middle of the separator

Question 4 Quadratic Kernel



- Here the linear separator is the same as the separator for the linear kernel, and the false negative values have been corrected, however, all of the true negative values are flagged as false positives

Question 4 RBF Kernel C = 1, 10, 100, 1000



- We observe that as the C value increases the error rate decreases, however we also observed (not plotted) that for $C > 1000$ the error rate increases again with the error rate being 99.5% at $C = 10000$ (down from 99.75% at $C = 1000$).
- At the optimal C value of 1000 we observe 1 false positive and 2 false negatives.