Assignment - 5

Question 5.2.1

1. For the ***L2 – Regularized logistic regression model***

   ➔ For the feature map ***x***, the most suitable value of c is ***100*** and accuracy score is ***70.23%*** and for the unregularized logistic regression accuracy score was ***68.25%***

   ➔ For the feature map ***[1, x, x^2]***, the most suitable value of c is ***100*** and accuracy score is ***65.18%*** and for the unregularized logistic regression accuracy score was ***65.53%***

2. For the ***Linear SVC***

   ➔ For the feature map ***x***, the most suitable value of c is ***1*** and accuracy score is ***63.49%*** and for the unregularized logistic regression accuracy score was ***68.25%***

   ➔ For the feature map ***[1, x, x^2]***, the most suitable value of c is ***10*** and accuracy score is ***66.66%*** and for the unregularized logistic regression accuracy score was ***65.53%***

Question 5.2.2

1. For the ***Model Ridge – regressor***

   ➔ For the feature map ***x***, the most suitable value of c is ***10*** and explained variance is ***0.768*** and for the unregularized linear regression explained variance was ***0.675***

   ➔ For the feature map ***[1, x, x^2]***, the most suitable value of c is ***0.01*** and explained variance is ***0.796*** and for the unregularized linear regression explained variance was ***0.654***

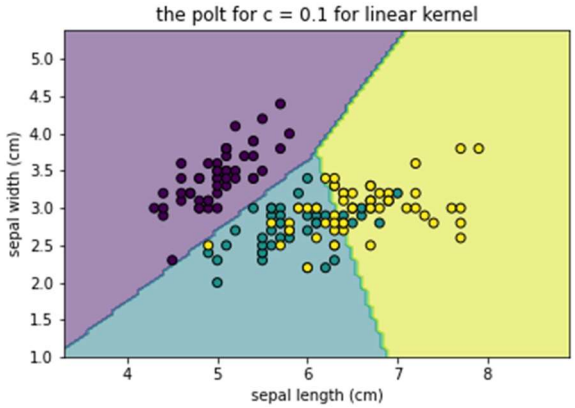
2. For the ***Model SVR***

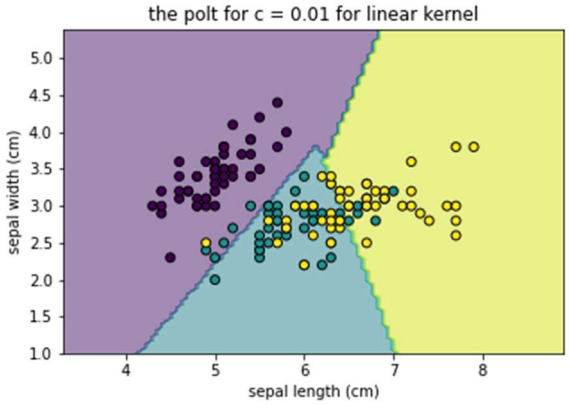
   ➔ For the feature map ***x***, the most suitable value of c is ***1*** and explained variance is ***0.754*** and for the unregularized linear regression explained variance was ***0.675***

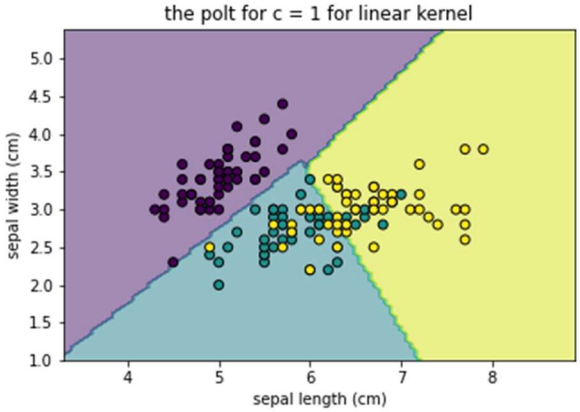
   ➔ For the feature map ***[1, x, x^2]***, the most suitable value of c is ***100*** and explained variance is ***0.587*** and for the unregularized linear regression explained variance was ***0.654***

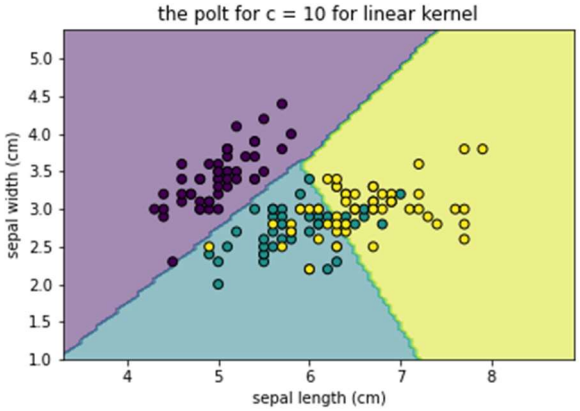
5.3.3

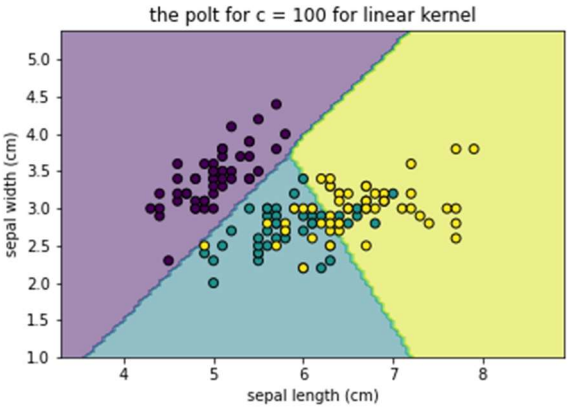
For linear kernel



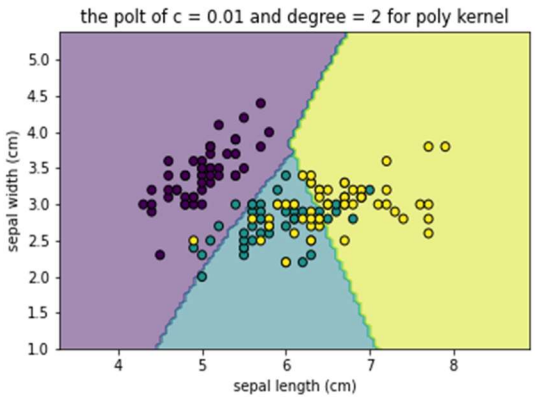


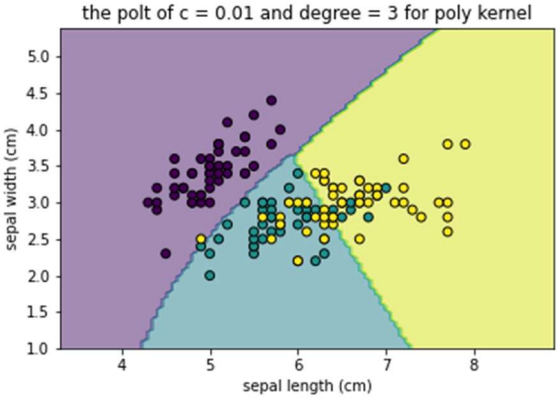


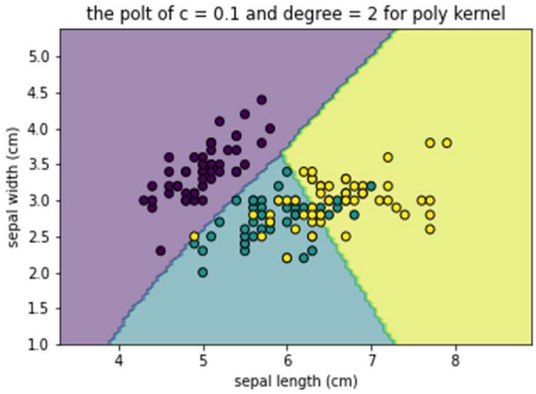


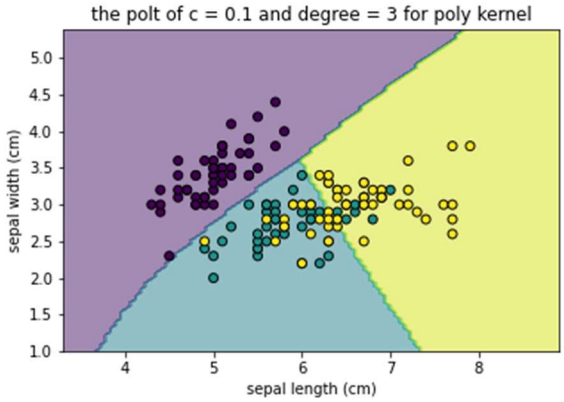


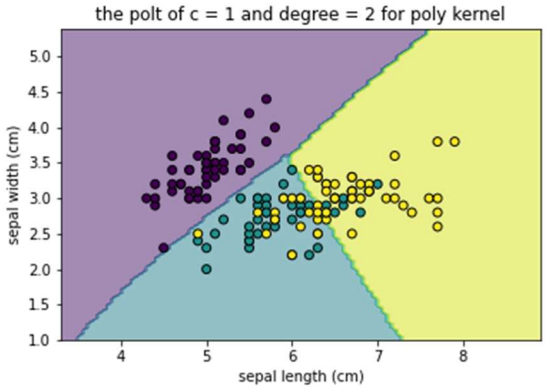
For Poly kernel

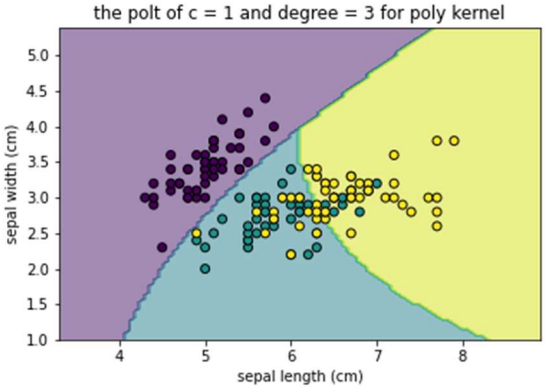


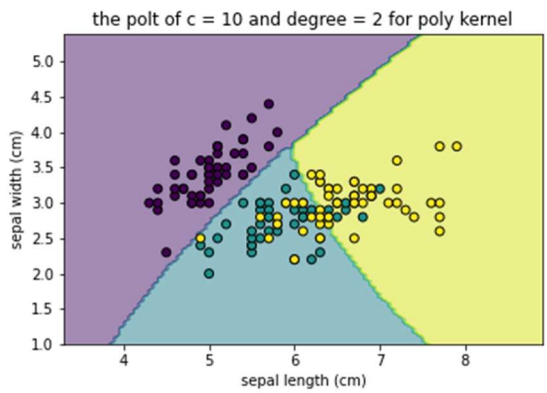


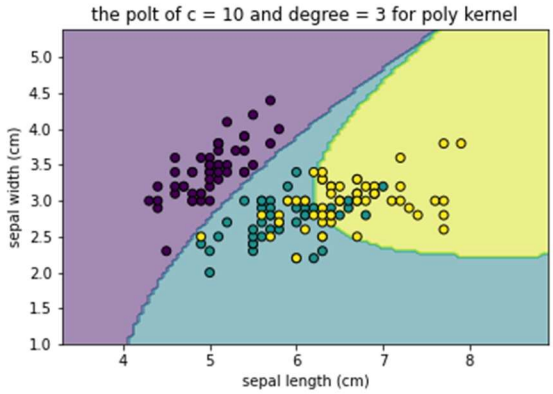


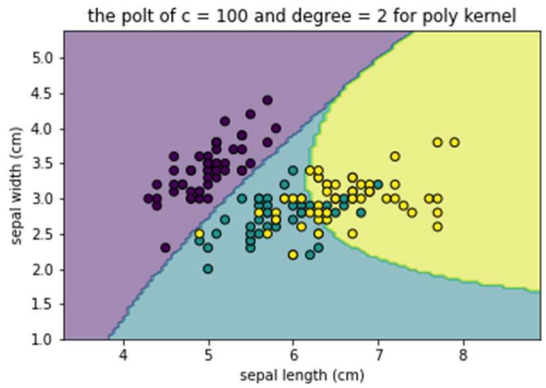


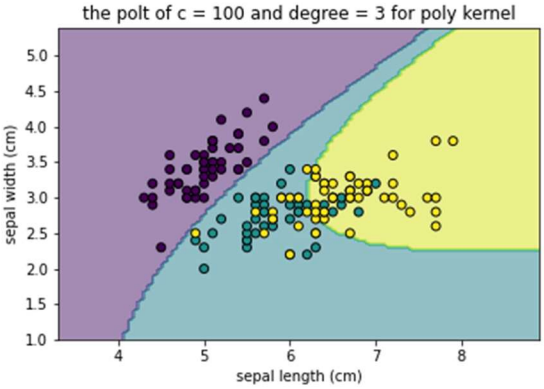






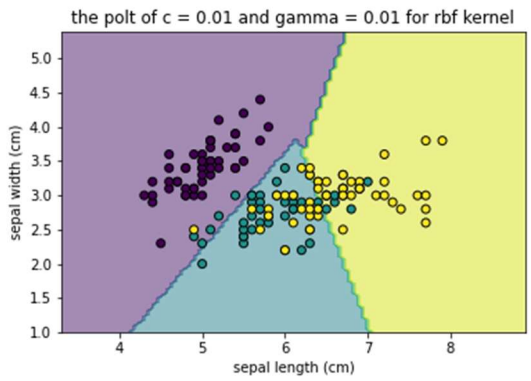


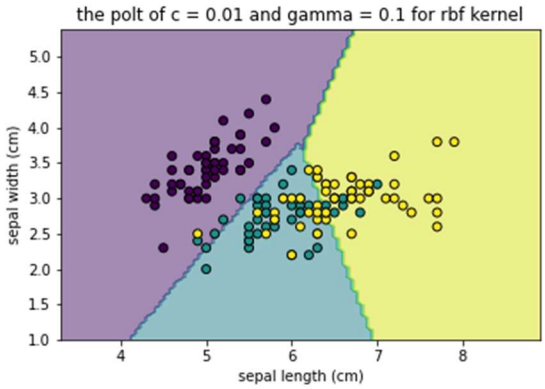


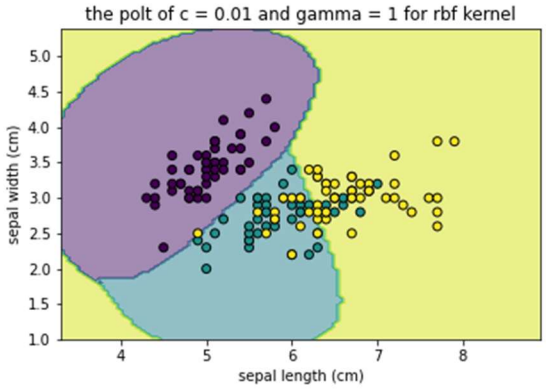


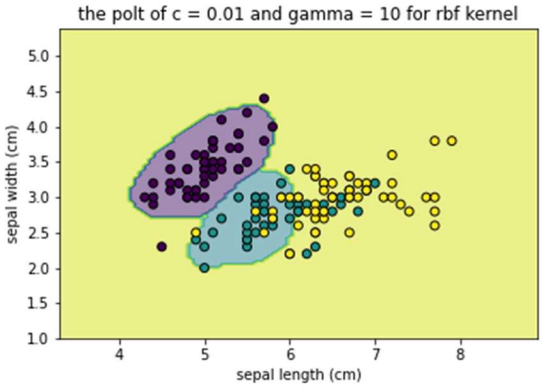
For 'rgf' kernel:

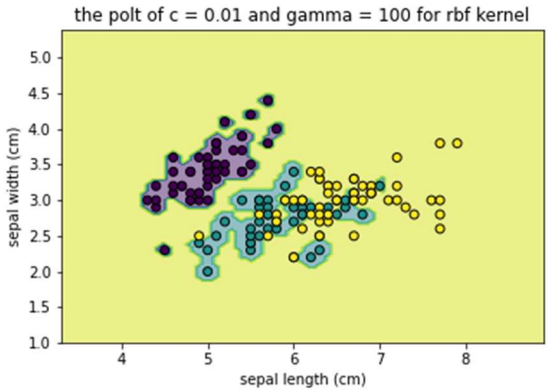
For c = 0.01 and gamma in [0.01,0.1,1,10,100]



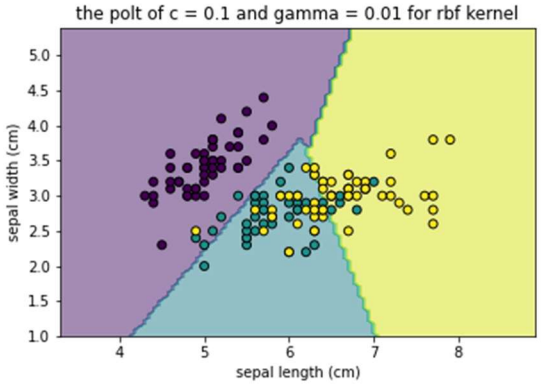


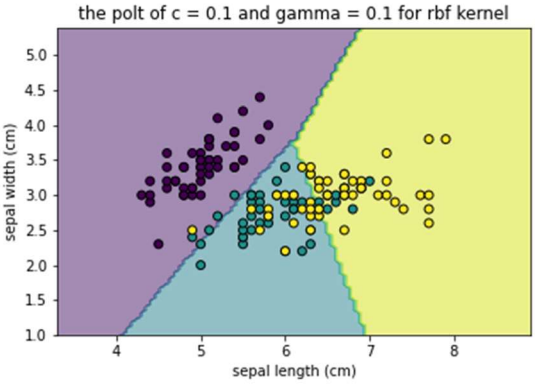


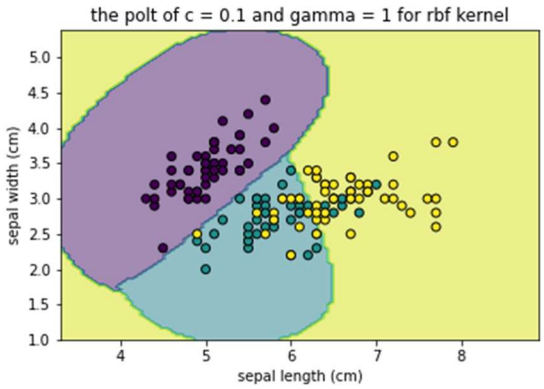


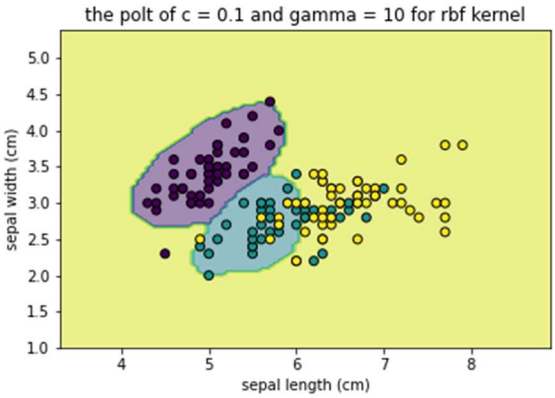


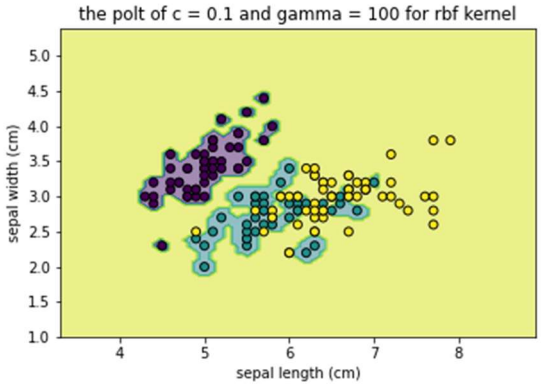
For c = 0.1 and gamma in [0.01,0.1,1,10,100]



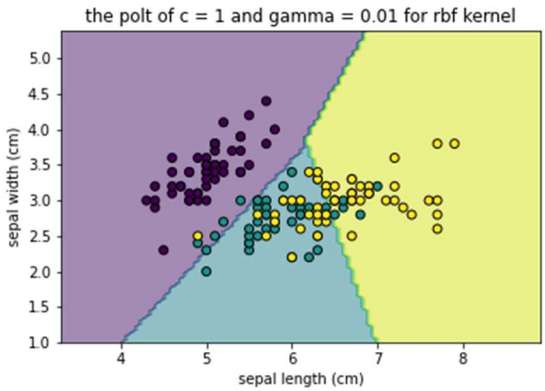


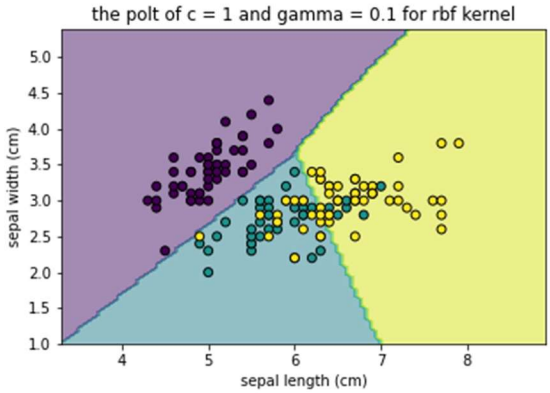


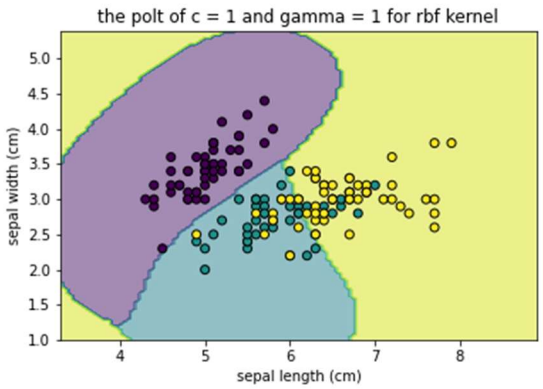


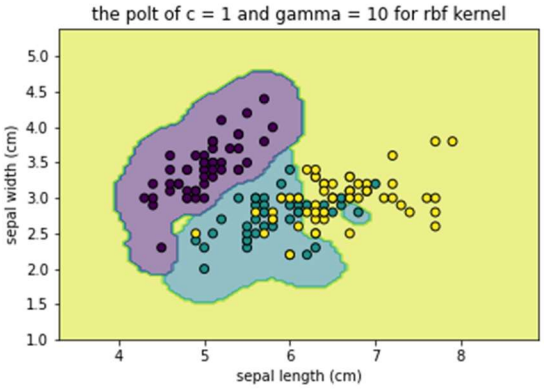


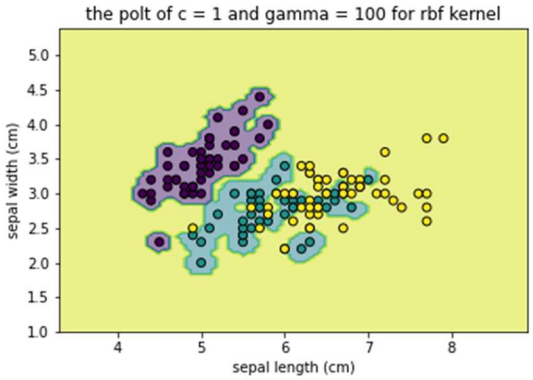
For c = 1 and gamma in [0.01,0.1,1,10,100]



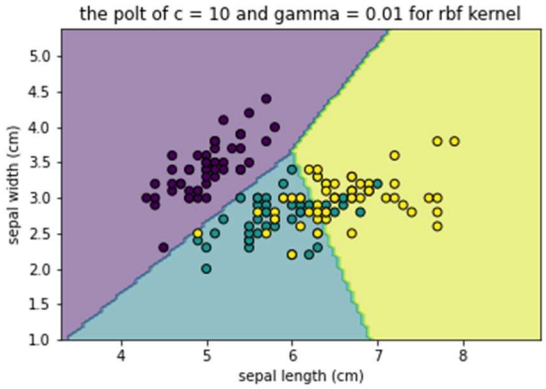


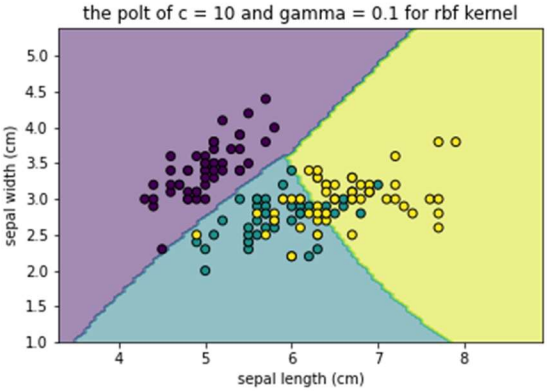


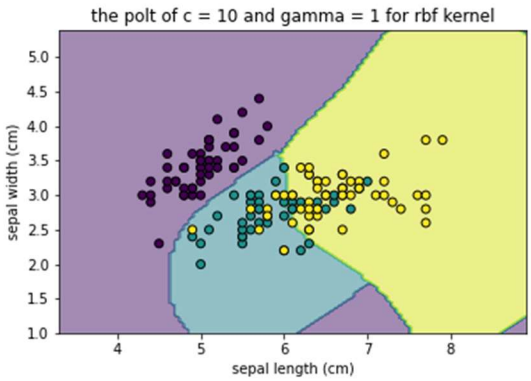


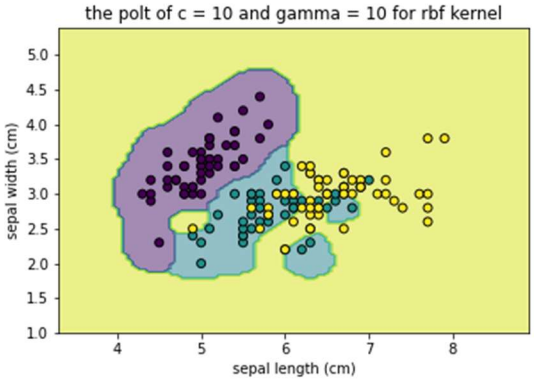


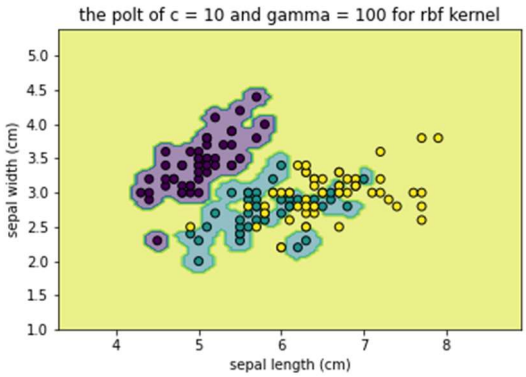
For c = 10 and gamma in [0.01,0.1,1,10,100]



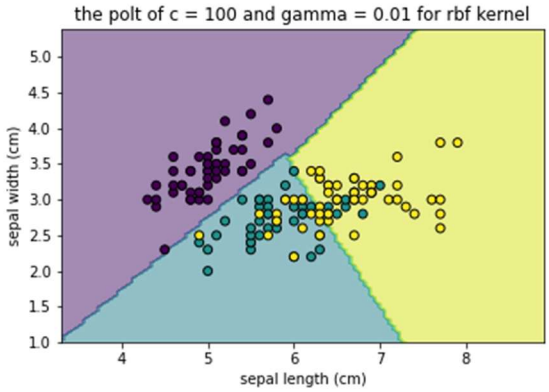


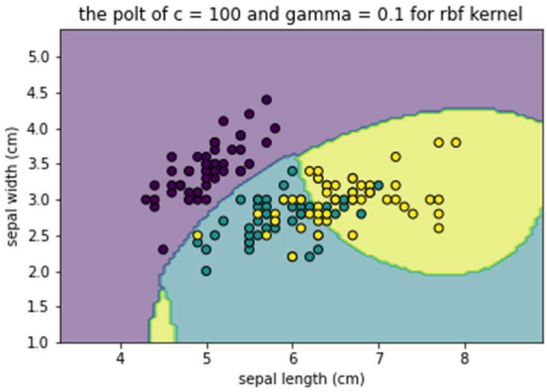


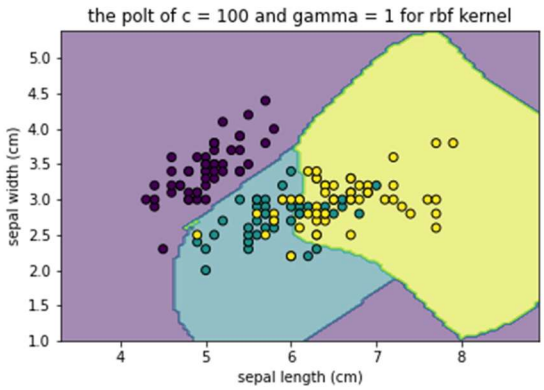




For c = 100 and gamma in [0.01,0.1,1,10,100]



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sepal length (cm)
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4.5
4.0
3.5
3.0
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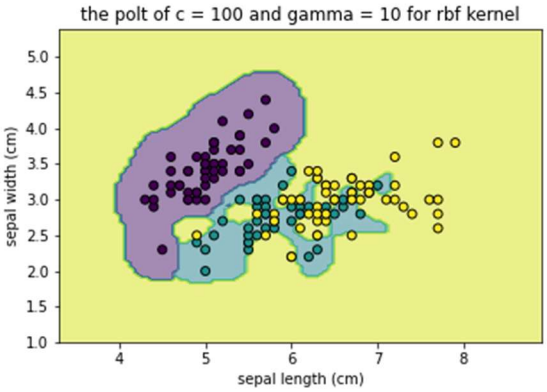
2.0
1.5
1.0
4
5
6
7
8


the polt of c = 100 and gamma = 10 for rbf kernel
sepal width (cm)
sepal length (cm)
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2.0
1.5
1.0
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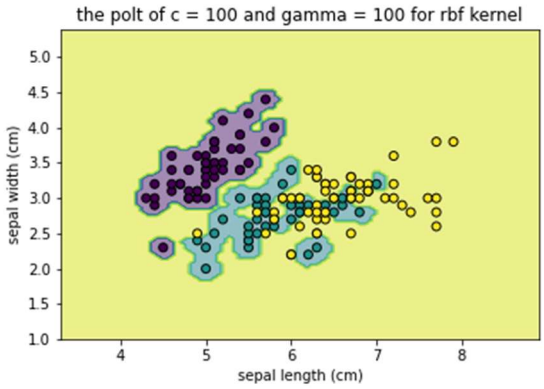
the polt of c = 100 and gamma = 100 for rbf kernel
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3.0
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2.0
1.5
1.0
4
5
6
7
8