Support Vector Machines

Follow the link http://scikit-learn.org/stable/modules/svm.html to learn about svc
You may also refer the SVM labsheet shared alongwith the assignment.

1. Download the following dataset Australian dataset from

   https://www.csie.ntu.edu.tw/~cjlin/libsvmtools/datasets/binary.html#australian

   a. Load the dataset
   b. Preprocess the dataset to fill the missing values
      i. For categorical feature fill it with mode
      ii. For numerical feature, fill it with mean

   c. Convert all the features to numerical.
   d. Use min-max normalization to bring all features in similar range.

2. Split the dataset into training and testing data
3. Apply SVM classifier using SVC function
   a. The parameters can be linear kernel and C value.
   b. For different values of parameter 'C', plot the accuracy of the test dataset.

4. Does the accuracy change if the kernel function changes? Use Poly kernel as well as RBF kernel to check the accuracy.