SVC Parameters When Using RBF Kernel

20 Dec 2017

In this tutorial we will visually explore the effects of the two parameters from the support vector classifier (SVC) when using the radial basis function kernel (RBF). This tutorial draws heavily on the code used in Sebastian Raschka's book Python Machine Learning.

Preliminaries

```
# Import packages to visualize the classifer
from matplotlib.colors import ListedColormap
import matplotlib.pyplot as plt
import warnings

# Import packages to do the classifying
import numpy as np
from sklearn.svm import SVC
```

Create Function To Visualize Classification Regions

You can ignore the code below. It is used to visualize the the decision regions of the classifier. However it is unimportant to this tutorial to understand how the function works.

```
def versiontuple(v):
    return tuple(map(int, (v.split("."))))


def plot_decision_regions(X, y, classifier, test_idx=None,
resolution=0.02):

    # setup marker generator and color map
    markers = ('s', 'x', 'o', '^', 'v')
```