Domain Adaptation for Image Classification

1. Office-Home dataset is a domain adaptation dataset, which consists of 65 categories of office depot from four domains (i.e., A: Art, C:Clipart, P:Product, R: Real-world). The raw images can be downloaded from http://hemanthdv.org/OfficeHome-Dataset/.
The 2048-dim ResNet50 deep learning features of all images can be downloaded from https://pan.baidu.com/s/1qvcWJCXVG8JkZnoM4BVoGg#list/path=%2F.

2. Conduct experiments in the following three settings (source domain -> target domain):
   a) A->R;   b) C->R;   c) P->R
   In X->Y setting, use the deep learning features X_X.csv as source domain features and X_Y.csv as target domain features.

3. Try deep learning feature + 3 traditional domain adaptation methods. Use SVM classifier. For the code of some domain adaptation methods, you can download from https://github.com/jindongwang/transferlearning/tree/master/code/traditional. Some code are written in MatLab. You can convert them to python.

4. Summarize your experimental results and write a project report in English. The project report should contain experimental setting, the domain adaptation methods you tried, the experimental results you obtained, and the experimental observations based on your experimental results.