

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 **at least 3 unsupervised traditional domain adaptation methods**. The optional choice is **1 deep domain adaptation method** if you have computing resources. For traditional domain adaptation methods, you can use **SVM classifier based on deep learning features**.
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.

For the code of some domain adaptation methods, you can download from <https://github.com/jindongwang/transferlearning/tree/master/code> or https://github.com/ustcnewly/domain_adaptation