

# Adapted Domain Specific Class Means

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Sources



Target



# The proposed domain adaptation (DA) approach

Most existing DA methods rely on the whole source data.

- ▶ We assume only class means from the sources.
  - Can be applied under the privacy concerns (sensitive documents, medical data, etc).

Main idea is to combine

- ▶ Stacked Marginalized Denoising Autoencoders (Chen *et al.* ICML'12).
  - to learn a mapping based on the correlation between target instances and domain specific class means.
- ▶ Domain Specific Class Means classifier (Csurka *et al.* Task-CV'14).
  - to predict target labels based on a softmax distanced to the adapted domain specific class means.