Unsupervised Domain Adaptation Based on Source-guided Discrepancy
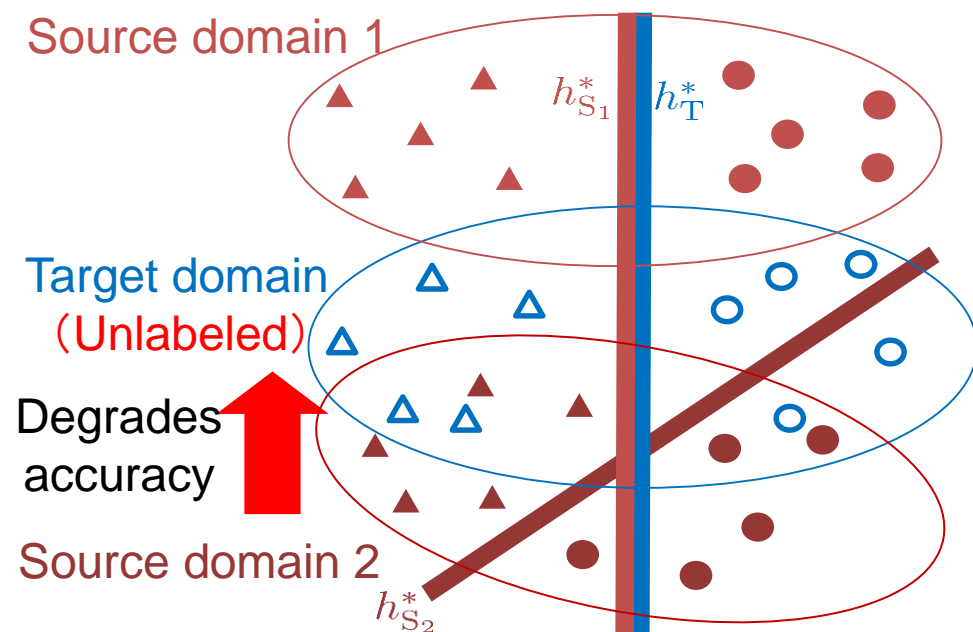
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Unsupervised Domain Adaptation

▲ : Positive ● : Negative △○ : Unlabeled

Source domain 1

$h_{\mathrm{S}_1}^*$ h_{T}^*

Target domain (Unlabeled)

Degrades accuracy

Source domain 2

$h_{\mathrm{S}_2}^*$

Which source domain is useful?

Contribution

Proposed a new discrepancy measure.
- Exploits labels in the source domain.
- Has a tighter generalization bound.
- Is computationally efficient.

	Using source labels	Generalization error bound	Computation complexity
$\mathcal{X}$-disc	No	Loose	High
$d_{\mathcal{H}}$	No	N/A	Low
S-disc [Proposed]	Yes	Tight	Low

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