Multi-Target Domain Adaptation with Class-Wise Attribute Transfer in Semantic Segmentation

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Problem
- Multi-target domain adaptation (MTDA) aims to adapt a single model from a labeled source domain to multiple unlabeled target domains.

Motivation
- One of the crucial aspects in Multi-Target Domain Adaptation is attribute alignment, given the varying image distribution across domains.
- However, previous methods [1, 2] only globally align attributes and do not achieve class-wise alignment, which has limited their performance.
- Therefore, we propose a method for class-wise attribute transfer from source domain to multiple target domains.

Proposed Method

- **Overall procedure**
  - Input images
  - HPP
  - Translated images
  - Reconstructed images

- **High-precision pseudo-labeling (HPP)**
  - Error propagation
  - Semantic consistency

- **Class-wise attribute transfer**

Ablation Study

- Effectiveness of HPP
- Attribute transfer comparison

Results

- Domain Transfer Results
- Multi-Target Domain Adaptation Results

Reference