Deep Semantic Matching with Foreground Detection and Cycle-Consistency

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Semantic matching
- **Input**: A set of images containing instances of an object category
- **Goal**: Estimate correspondences between image pairs

Challenges
- Background clutters
- Inconsistent bidirectional matching
- Require keypoint annotation for supervision

Weakly-supervised semantic matching network

Experimental results

(a) Results on PF-PASCAL.
(b) Results on PF-WILLOW.
(c) Results on TSS.

(d) Ablation study on PF-PASCAL.

(e) Effect of using the foreground-guided matching loss $\mathcal{L}_{\text{matching}}$.

References: