

Supplementary for “Cross-view Asymmetric Metric Learning for Unsupervised Person Re-identification”

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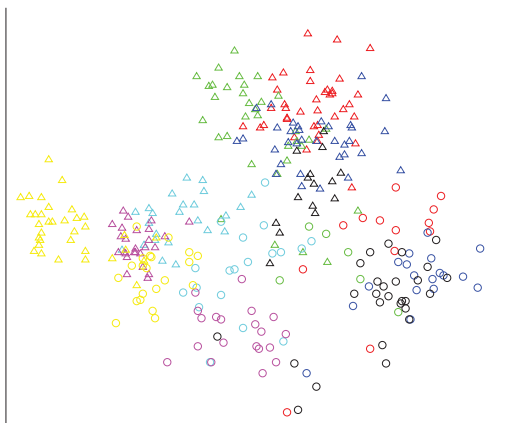
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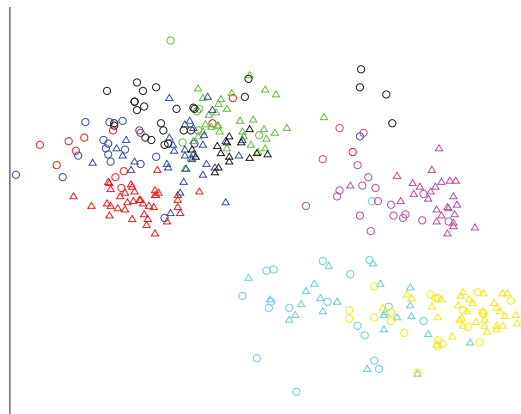
1. Gradual Stages of CAMEL

Figure 1 shows how CAMEL learns the shared space by degree. Note that from the original stage to the middle stage 1, the distribution changes greatly. This is because the close-form solution produces a “sharp” change of the transformation matrices: equivalently, the original feature is transformed by a universal identity matrix I , and in middle stage 1 the feature is transformed by the learned view-specific transformations. Then, the following stages gradually reduce the view-specific bias while rotating and translating, because the changes in the learned transformations are not so great as the first iteration.

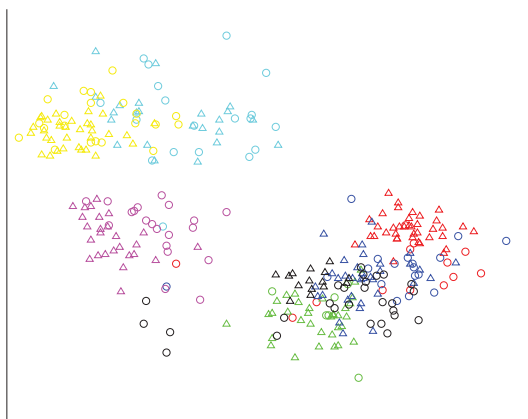
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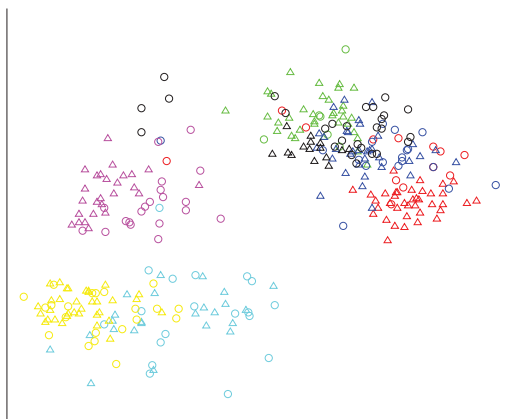
(a) Original distribution



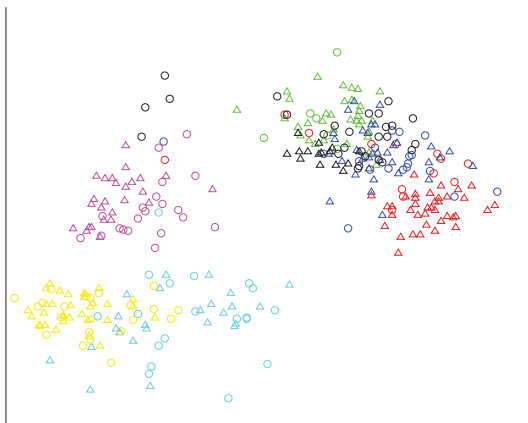
(b) Middle stage 1



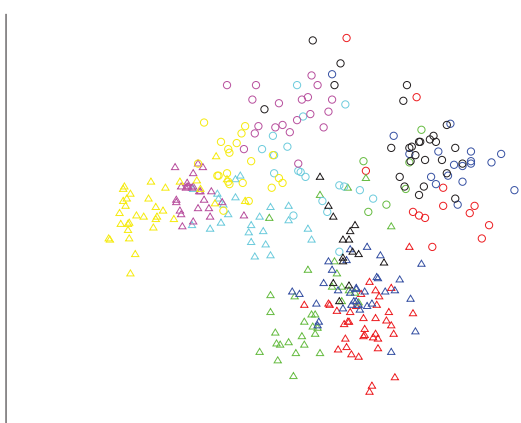
(c) Middle stage 2



(d) Middle stage 3



(e) Convergence



(f) Symmetric one

Figure 1. Illustration of how symmetric and asymmetric metric clustering structure data using our method for the unsupervised RE-ID problem. One shape (triangle or circle) stands for samples from one view, while one color indicates samples of one person. (a) Original distribution (b)-(e) Gradual stages (f) Distribution in the space learned by symmetric metric clustering. (Best viewed in color)