

Person Transfer GAN to Bridge Domain Gap for Person Re-Identification

1. New dataset to cater to various scenarios where best re-id fails. (We can borrow the re-id algo from this may be)
2. Proposes Person Transfer Generative Adversarial Network to reduce gap between training and testing various datasets.

Diversity Regularized Spatiotemporal Attention for Video-Based Person Re-Identification

1. Non overlapping cameras
2. propose a new spatiotemporal attention model that automatically discovers a diverse set of distinctive body parts. This allows useful information to be extracted from all frames without succumbing to occlusions and misalignments.
3. the network learns latent representations of the face, torso and other body parts using the best available image patches from the entire video sequence

A Pose-Sensitive Embedding for Person Re-Identification With Expanded Cross Neighborhood Re-Ranking

1. straightforward inclusion of acquired camera view and/or the detected joint locations into a convolutional neural network helps to learn a very effective representation.
2. propose a new unsupervised and automatic re-ranking framework that achieves state-of-the-art re-ranking performance.

Image-Image Domain Adaptation With Preserved Self-Similarity and Domain-Dissimilarity for Person Re-Identification

Person re-identification (re-ID) models trained on one domain often fail to generalize well to another. In our attempt, we present a "learning via translation" framework. In the baseline, we translate the labeled images from source to target domain in an unsupervised manner. We then train re-ID models with the translated images by supervised methods.

Human Semantic Parsing for Person Re-Identification

we propose to adopt human semantic parsing which, due to its pixel-level accuracy and capability of modeling arbitrary contours, is naturally a better alternative.

Video Person Re-Identification With Competitive Snippet-Similarity Aggregation and Co-Attentive Snippet Embedding

Too complicated and does not deal with the initial stage of the problem

Mask-Guided Contrastive Attention Model for Person Re-Identification

For fine tuning.

we first introduce the binary segmentation masks to construct synthetic RGB-Mask pairs as inputs, then we design a mask-guided contrastive attention model (MGCAM) to learn features separately from the body and background regions.

Person Re-Identification With Cascaded Pairwise Convolutions

Exploring Disentangled Feature Representation Beyond Face Identification - not relevant

Multi-Level Factorisation Net for Person Re-Identification

Multi-Level Factorisation Net (MLFN), a novel network architecture that factorises the visual appearance of a person into latent discriminative factors at multiple semantic levels without manual annotation.

Attention-Aware Compositional Network for Person Re-Identification - uses pose estimation

Unifying Identification and Context Learning for Person Recognition

In particular, we propose a Region Attention Network, which is learned to adaptively combine visual cues with instance-dependent weights.

Deep Group-Shuffling Random Walk for Person Re-Identification

Transferable Joint Attribute-Identity Deep Learning for Unsupervised Person Re-Identification

Transfer learning

Harmonious Attention Network for Person Re-Identification

1. Existing person re-identification (re-id) methods either assume the availability of well-aligned person bounding box images as model input or rely on constrained attention selection mechanisms to calibrate misaligned images.
2. the advantages of jointly learning attention selection and feature representation in a Convolutional Neural Network (CNN) by maximising the complementary information of different levels of visual attention subject to re-id discriminative learning constraints.
3. Specifically, we formulate a novel Harmonious Attention CNN (HA-CNN) model for joint learning of soft pixel attention and hard regional attention along with simultaneous optimisation of feature representations, dedicated to optimise person re-id in uncontrolled (misaligned) images.

Efficient and Deep Person Re-Identification Using Multi-Level Similarity

In this work, we propose an efficient, end-to-end fully convolutional Siamese network that computes the similarities at multiple levels.

Pose Transferrable Person Re-Identification

- Existing RE-id datasets (like Market-1501) do not provide sufficient pose coverage to train a RE-id system that is robust enough.
- The paper presents a pose-transferrable re-identification framework that transfers pose-instances from one instances to another. This increases the richness of pose-variations in the target dataset.
- The process involves 3 steps -
 1. Train the model using target dataset (for eg. Market-1501)
 2. Use the pre-trained model called a guider, to train skeleton to image transformation. The training input is images and skeletons from MARS and target dataset.
 3. Large number of pose-varied samples are generated to enhance the RE-id model.

Adversarially Occluded Samples for Person Re-Identification

- This paper aims to eliminate Re-id problems involving occlusions by introducing Adversarially Occluded Samples.
- Adversarially Occluded Samples are generated based on a trained Re-Id model and these new samples are used as extra samples to re-train the Re-id model.

MULTI CAMERA VARIATION MINIMIZATION [Camera Style Adaptation for Person Re-Identification](#)

- This paper introduces CamStyle, a data augmentation approach that tries to solve the problem caused by image style variations caused by different cameras.

SAMPLING

Exploit the Unknown Gradually: One-Shot Video-Based Person Re-Identification by Stepwise Learning

- Proposes using stepwise learning to steadily improve the re-identification capabilities of the CNN
- The first step is initializing the CNN using a single tracklet that is labelled, for every identity.
- Then the CNN model is trained iteratively -
 1. Sample a few candidates with most reliable pseudo labels from unlabeled tracklets
 2. Update the CNN model according to the selected data.

Dual Attention Matching Network for Context-Aware Feature Sequence Based Person Re-Identification

- This paper proposes an end-to-end trainable framework Dual ATtention Matching network (DuATM)
- The core component of our DuATM framework is a dual attention mechanism, in which both intra sequence and inter-sequence attention strategies are used for feature refinement and feature-pair alignment, respectively.

Easy Identification From Better Constraints: Multi-Shot Person Re-Identification From Reference Constraints

Eliminating Background-Bias for Robust Person Re-Identification

Features for Multi-Target Multi-Camera Tracking and Re-Identification

Viewpoint-Aware Attentive Multi-View Inference for Vehicle Re-Identification

Multi-Shot Pedestrian Re-Identification via Sequential Decision Making

- It matches two tracks of pedestrians from different cameras.
- Trains an agent to verify a pair of images at each time. The agent could choose to output the result (same or different) or request another pair of images to verify (unsure). By this way, the model implicitly learns the difficulty of image pairs, and postpone the decision when the model does not accumulate enough evidence.

End-to-End Deep Kronecker-Product Matching for Person Re-Identification

- Kronecker Product Matching module to match feature maps of different persons in an end-to-end trainable deep neural network.
- A novel feature soft warping scheme is designed for aligning the feature maps based on matching results, which is shown to be crucial for achieving superior accuracy.

Exploiting Transitivity for Learning Person Re-Identification Models on a Budget

Deep Spatial Feature Reconstruction for Partial Person Re-Identification: Alignment-Free Approach

Unsupervised Cross-Dataset Person Re-Identification by Transfer Learning of Spatial-Temporal Patterns

Resource Aware Person Re-Identification Across Multiple Resolutions

Group Consistent Similarity Learning via Deep CRF for Person Re-Identification

RE_ID METHODS

FPNN

https://www.cv-foundation.org/openaccess/content_cvpr_2014/papers/Li_DeepReID_Deep_Filter_2014_CVPR_paper.pdf

<http://www.cbsr.ia.ac.cn/users/zlei/papers/ICPR2014/Yi-ICPR-14.pdf>