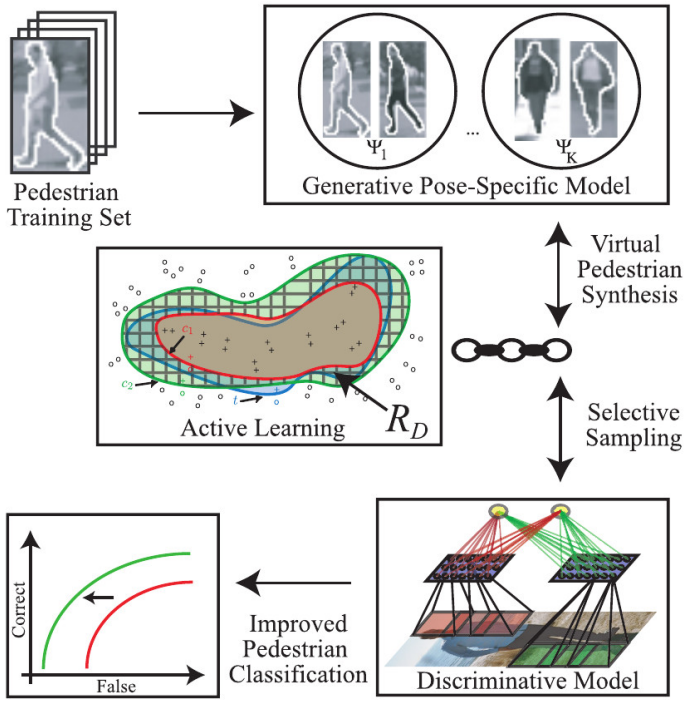
A Mixed Generative-Discriminative Framework for Pedestrian Classification

M. Enzweiler and D. M. Gavrila (CVPR 2008)



- Pedestrian classification utilizing synthesized virtual samples of a learned generative model to enhance a discriminative model
- Address bottleneck caused by the scarcity of samples of the target class
- Generative model captures prior knowledge about pedestrian class in terms of probabilistic shape and texture models
- Selective sampling, by means of probabilistic active learning, guides the training process towards the most informative samples
- Virtual samples can be considered as a regularization term to the real data
- Signification improvement in classification performance in large-scale real-world datasets