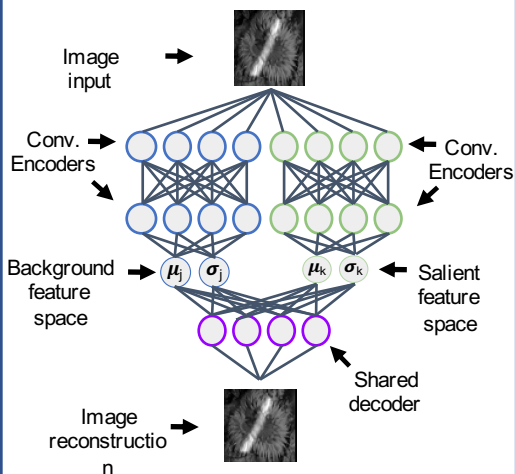# Contrastive learning of salient features

Input data: Background (BG) and Salient (SL) images
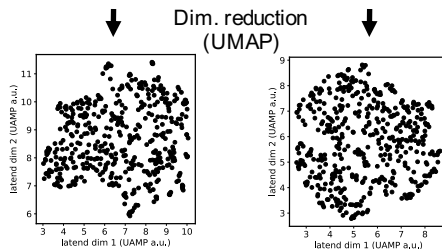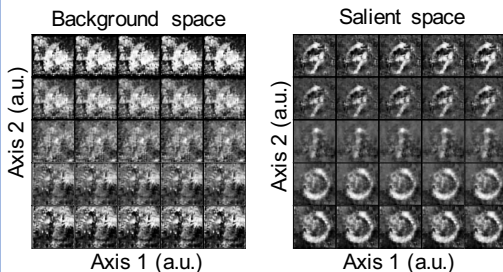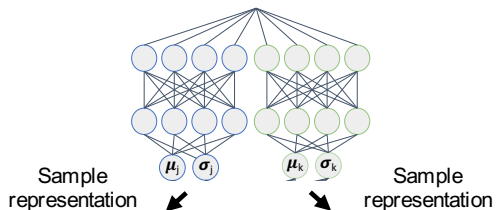
BG image (IMAGENET)
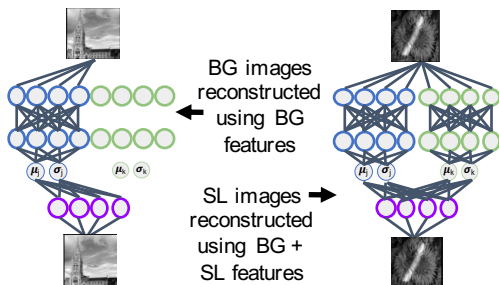
SL image IMAGENET+MNIST)

Conv. Encoders

Salient feature space

Shared ecoder

BG images reconstructed using BG features

SL images reconstructed using BG + SL features

Sample representation

Sample representation

μ_j σ_j μ_k σ_k

Background space

Salient space

Axis 2 (a.u.)

Axis 1 (a.u.)

Axis 2 (a.u.)

Axis 1 (a.u.)

Dim. reduction (UMAP)

latent dim 2 (UAMP a.u.)
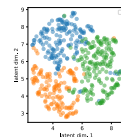
latent dim 1 (UAMP a.u.)

latent dim 2 (UAMP a.u.)

latent dim 1 (UAMP a.u,.)

GMM clustering

Salient features learned from overlapping (BG+SL) images

latent dim. 2

latent dim. 1

Cluster prototypes