

## Discussion L10b (Deep generative modelling)

1. What is the essence of deep generative modelling – what are shared characteristics (the common denominator)?
2. DBN, VAE, GAN are stochastic models – but what are key differences?
3. What could be the reason for comparatively more blurry reconstruction of images with VAEs than with GANs? What is the underlying difference in their generative philosophy (how they model data distribution)?
4. What problem do overcomplete AEs address when compared to undercomplete AEs? How would you explore the latent manifold in AEs?
5. What role can CNNs play in deep generative modelling? Think of some concrete examples.