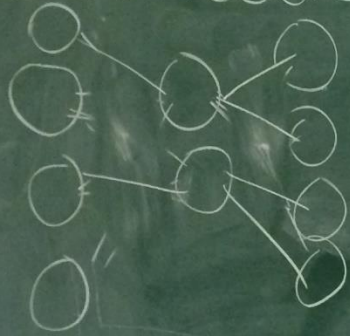
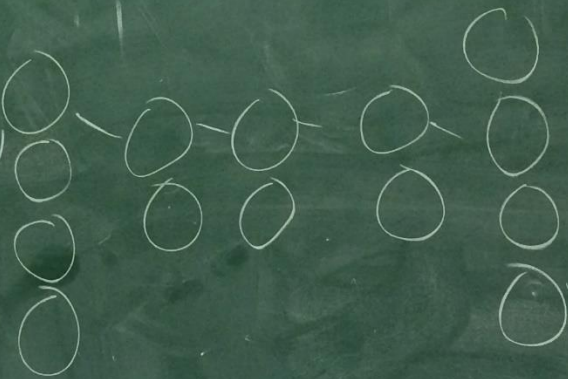


# Unsupervised Learning

## Autoencoder



## Denoising autoencoders



Learning rate / step size

Classification: add softmax layer

$$\frac{e^{x_i}}{\sum_j e^{x_j}} \begin{bmatrix} 0.3 \\ 0.1 \\ 0.6 \end{bmatrix} \begin{array}{l} \text{dog} \\ \text{cat} \\ \text{professor} \end{array}$$