Continuous mixture of Gaussians

$$p(x \mid w) = \int p(x \mid t, w)\, p(t) dt$$

$$p(t) = \mathcal{N}(0, I)$$

$$p(x \mid t, w) = \mathcal{N}(\mu(t, w), \mathrm{diag}(\sigma^2(t, w)))$$