

$$h(\theta | x) = \frac{f(x|\theta)g(\theta)}{\int f(x|\theta)g(\theta)d\theta}$$

$$= \frac{\cancel{s(x)}f(x|\theta)g(\theta)}{\int \cancel{s(x)}f(x|\theta)g(\theta)d\theta}$$

$$f(\mu) = \frac{1}{\sqrt{2\pi}\sigma_0} \exp\left(-\frac{(\mu-\mu_0)^2}{2\sigma_0^2}\right)$$

wrong

$$f(\mu) = \text{const.} \cdot \exp\left(-\frac{(\mu-\mu)^2}{2\sigma^2}\right)$$