Maximum a posteriori

$$\theta_{\mathrm{MP}} = arg \max_{\theta} P(\theta|X)$$

$$\theta_{\text{MP}} = arg \max_{\theta} \frac{P(X|\theta)P(\theta)}{P(X)}$$

$$\theta_{\mathrm{MP}} = arg \max_{\theta} P(X|\theta)P(\theta)$$

Optimization problem!

