

Exercise: Gibbs sampling for probit regression

Derive the full conditionals for performing Gibbs sampling for $p(\mathbf{w}, \mathbf{z}|\mathcal{D})$. Hint: we can sample from a truncated Gaussian, $\mathcal{N}(z|\mu, \sigma)\mathbb{I}(a \leq z \leq b)$ in two steps: first sample $u \sim U(\Phi((a - \mu)/\sigma), \Phi((b - \mu)/\sigma))$, then set $z = \mu + \sigma\Phi^{-1}(u)$ (?).