



$$z \sim \mathcal{N}((0, \sigma^2)) \tag{1}$$

$$p(p = 1) = \frac{1}{1 + \exp |xzy|} \tag{2}$$

$$\beta \sim \text{Beta}(\eta) \tag{3}$$

$$r \sim \text{Bern}(\beta_p) \tag{4}$$