Flexible Linear Thermometers

Generative model

How does **height** influence **weight**?

$$H \longrightarrow W \longleftarrow U$$

$$W = f(H, U)$$

"Weight is some function of height & unmeasured stuff"

Statistical model

How does average **weight** change with **height**?

$$W_i \sim \text{Normal}(\mu_i, \sigma)$$

$$\mu_i = \alpha + \beta H_i$$

$$\alpha \sim \text{Normal}(0, 10)$$

$$\beta \sim \text{Uniform}(0, 1)$$

$$\sigma \sim \text{Uniform}(0, 10)$$