

## Methods

Agent Movement Onset Time Mean	$\mu_A$
Agent Movement Onset Time Uncertainty	$\sigma_A$
Reaction Time Mean	$\mu_{RT}$
Reaction Time Uncertainty	$\sigma_{RT}$
Movement Time Mean	$\mu_{MT}$
Movement Time Uncertainty	$\sigma_{MT}$
Neuromechanical Delay Mean	$\mu_{NMD}$
Neuromechanical Delay Uncertainty	$\sigma_{NMD}$
Stopping Time Uncertainty	$\sigma_\tau$
Switch Time Mean	$\mu_{switch}$
Switch Time Uncertainty	$\sigma_{switch}$

**Table 1.** Inputs to the model

Reaction Time Delay	$\mathcal{N}(\mu_{RT}, \sigma_{RT})$
Movement Time Delay	$\mathcal{N}(\mu_{MT}, \sigma_{MT})$
Neuromechanical Delay	$\mathcal{N}(\mu_{NMD}, \sigma_{NMD})$
Stopping Time Uncertainty	$\sigma_\tau$
Switch Time Delay	$\mathcal{N}(\mu_{switch}, \sigma_{switch})$
Agent Movement Onset Time	$\mathcal{N}(\mu_A, \sigma_A)$

**Table 2.** Inputs to the model

$$f(t) = \frac{1}{\sigma\sqrt{2\pi}} e^{-\frac{1}{2}\left(\frac{t-\mu}{\sigma}\right)^2} \quad (1)$$

$$F(t) = P(T \leq t) = \int_{-\infty}^t f(t)dt \quad (2)$$

$$t \in [0, 1500] \quad (3)$$

$$T \sim \mathcal{N}(\mu, \sigma) \quad (4)$$

$$P(React|\tau) = P(\tau > \mu_A; \sigma_{tau}, \sigma_A) \quad (5)$$

$$P(Guess|\tau) = P(\tau < \mu_A; \sigma_{tau}, \sigma_A) \quad (6)$$

$$\mu_X = \sum_{i=-\infty}^{\infty} x_i f(x_i; \mu_X, \sigma_X) \quad (7)$$

$$\mathbb{1}_{a_i, t_i \in S} = \begin{cases} 1, & \text{if } a_i, t_i \in S \\ 0, & \text{if } a_i, t_i \notin S \end{cases} \quad (8)$$

$$\mu_{RMO} = \mu_{A_{cutoff}} + \mu_{RT} \quad (9)$$

$$\sigma_{RMO} = \sqrt{\sigma_{A_{cutoff}}^2 + \sigma_{RT}^2} \quad (10)$$

$$\mu_{GMO} = \tau + \mu_{NMD} + \mu_{switch} \quad (11)$$

$$\sigma_{GMO} = \sqrt{\sigma_{\tau}^2 + \sigma_{NMD}^2 + \sigma_{switch}^2} \quad (12)$$

$$R_{win} = 1 \quad (13)$$

$$R_{indecision} = 0 \quad (14)$$

$$R_{incorrect} = 0 \quad (15)$$