

TimeIncrement()

Assuming arguments $\{x, dx, tprev, tcur, dt\} \in \mathbb{R}$, calculate x' —the number to which x should be updated given time changes:

$$\Delta t := tcur - tprev$$

$$\frac{dx}{dt} = \frac{\Delta x}{\Delta t} \Rightarrow \Delta x = \Delta t \frac{dx}{dt}$$

$$x' = x + \Delta x \text{ ensuring } x' \in [0, 1]$$

EnviroUnityToNN()

Assuming a vertical stretch factor $a \in [0, 1]$, calculate d_{NN} , the enviro tensor distance for a param, given d_{unity} , the walking distance between the agent and the nearest stimulus of that param type in Unity:

$$d_{NN} := 1 - \exp(-d_{unity} a)$$