





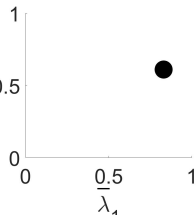


TASKS	
HUMAN	ROBOT
γ_1 	
γ_2 	
\vdots	\vdots
γ_N 	

incoming task γ

task requirements $\bar{\lambda}$



update agent capabilities

human capabilities
 $bel(\lambda^H)$

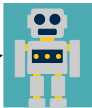
robot capabilities
 $bel(\lambda^R)$

compute agent trust

trust in human τ_γ^H



trust in robot τ_γ^R



compute task reward and agent costs

compute expected total reward

human expected total reward \mathbb{E}_γ^H

robot expected total reward \mathbb{E}_γ^R

If $\mathbb{E}_\gamma^H > \mathbb{E}_\gamma^R$:

assign task to human

If $\mathbb{E}_\gamma^R > \mathbb{E}_\gamma^H$:

assign task to robot

observe task outcome

success

failure

outcome