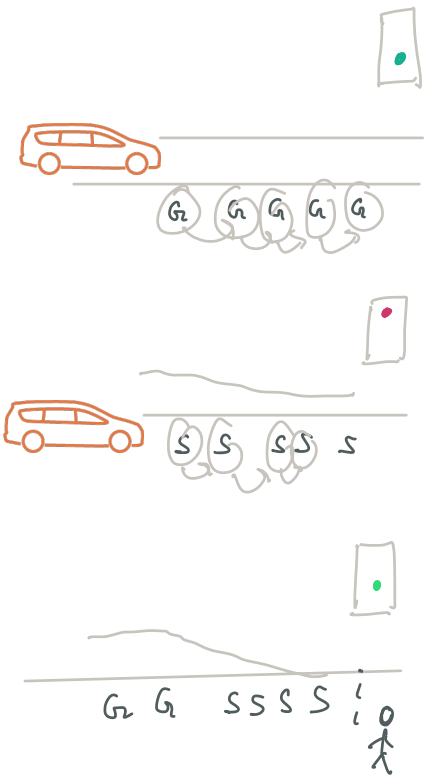
Various Ways To Give Feedback

- ✓ E-stop → You did bad [0/1]

* Define a goal + distance
* ✓ Demonstrations
* ✓ Intervention
* Positive Feedback
* Ranking / Preference
* Natural Language



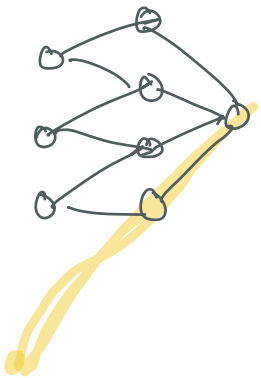
INPUT

COLOR OF THE LIGHT

POSE OF OTHER ACTORS

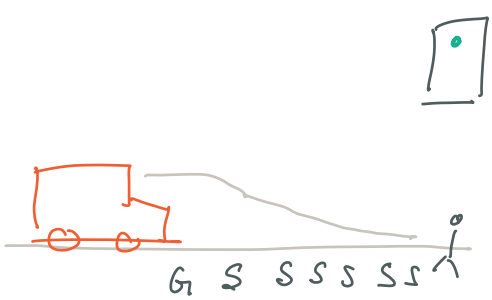
CURRENT VELOCITY

PREVIOUS ACTION



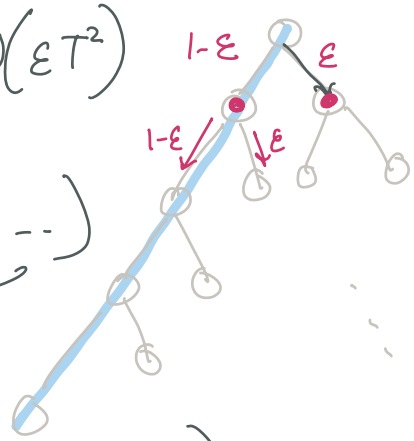
OUTPUT

STOP OR GO



PROVE $O(\varepsilon T^2)$ FOR BC

$$J(\tilde{\pi}) - J(\pi^*) \leq O(\varepsilon T^2)$$



$$\varepsilon \times \underbrace{(1+1+1+1+1+1+\cdots)}_{T}$$

$$+ (1-\varepsilon) \times \Big(0 + \varepsilon \underbrace{(1+1+1+1+\cdots)}_{T-1}\Big)$$

$$+ (1-\varepsilon)\,(0 + \cdots\cdots)$$

$$= \varepsilon T + (1-\varepsilon)\,\varepsilon\,(T-1) + (1-\varepsilon)^2 \cdot \varepsilon\,(T-2) + \cdots$$

$$= \varepsilon \Big(T + \underbrace{(1-\varepsilon)}_{\leq 1}(T-1) + \underbrace{(1-\varepsilon)^2}_{\leq 1}(T-2) + \cdots\cdots \Big)$$

$$\leq \varepsilon \big(T + (T-1) + (T-2) + \cdots + 1 \big)$$

$$\leq \varepsilon\, \frac{T(T+1)}{2} \approx O(\varepsilon T^2)$$