

## Lecture 2: Markov Decision Processes

## └ Markov Decision Processes

## └ Policies

# Policies (1)

## Definition

A *policy*  $\pi$  is a distribution over actions given states,

$$\pi(a|s) = \mathbb{P}[A_t = a \mid S_t = s]$$

- A policy fully defines the behaviour of an agent
- MDP policies depend on the current state (not the history)
- i.e. Policies are *stationary* (time-independent),  
 $A_t \sim \pi(\cdot | S_t), \forall t > 0$