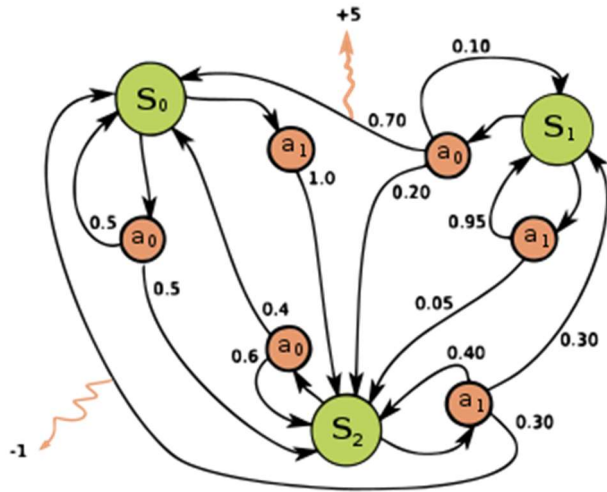


# Markov Decision Process Representations

Consider the MDP shown in the state-transition diagram below.



Complete the tabular (matrix) representations of the  $T(s, a, s')$  and  $R(s, a, s')$ .

T				R			
	$S_0$	$S_1$	$S_2$		$S_0$	$S_1$	$S_2$
$S_0, a_0$	0.5	0.0	0.5		0.0	0.0	0.0
$S_0, a_1$	0.0	0.0	1.0		0.0	0.0	0.0
$S_1, a_0$							
$S_1, a_1$							
$S_2, a_0$							
$S_2, a_1$							

Next, take a different MDP, represented below in matrix form, and draw its state-transition diagram.

T				R	
	$S_0$	$S_1$		$S_0$	$S_1$
$S_0, a_0$	0.8	0.2		2	2
$S_0, a_1$	0.5	0.5		5	4
$S_1, a_0$	0.5	0.5		2	2
$S_1, a_1$	0.2	0.8		4	-10