
Deluca

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Google AI Princeton

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DELUCA PACKAGE

1.1 Agents

<code>deluca.agents.Adaptive(*args, **kwargs)</code>	
<code>deluca.agents.Deep(*args, **kwargs)</code>	Generic deep controller that uses zero-order methods to train on an environment.
<code>deluca.agents.DRC(*args, **kwargs)</code>	
<code>deluca.agents.GPC(*args, **kwargs)</code>	
<code>deluca.agents.Hinf(*args, **kwargs)</code>	Hinf: H-infinity controller (approximately).
<code>deluca.agents.ILQR(*args, **kwargs)</code>	
<code>deluca.agents.LQR(*args, **kwargs)</code>	
<code>deluca.agents.PID(*args, **kwargs)</code>	PID: agent that plays a PID policy
<code>deluca.agents.Zero(*args, **kwargs)</code>	Zero: agent that plays the zero action
<code>deluca.agents.Agent(*args, **kwargs)</code>	

1.2 Envs

<code>deluca.envs.classic.Acrobot(*args, **kwargs)</code>	Acrobot is a 2-link pendulum with only the second joint actuated. Initially, both links point downwards. The goal is to swing the end-effector at a height at least the length of one link above the base. Both links can swing freely and can pass by each other, i.e., they don't collide when they have the same angle. STATE: The state consists of the <code>sin()</code> and <code>cos()</code> of the two rotational joint angles and the joint angular velocities : <code>[cos(theta1) sin(theta1) cos(theta2) sin(theta2) thetaDot1 thetaDot2]</code> . For the first link, an angle of 0 corresponds to the link pointing downwards. The angle of the second link is relative to the angle of the first link. An angle of 0 corresponds to having the same angle between the two links. A state of <code>[1, 0, 1, 0, . . . , . . .]</code> means that both links point downwards. ACTIONS: The action is either applying +1, 0 or -1 torque on the joint between the two pendulum links. REFERENCE: .. warning:: This version of the domain uses the Runge-Kutta method for integrating the system dynamics and is more realistic, but also considerably harder than the original version which employs Euler integration, see the <code>AcrobotLegacy</code> class.
<code>deluca.envs.classic.CartPole(*args, **kwargs)</code>	Description:
<code>deluca.envs.classic.MountainCar(*args, **kwargs)</code>	
<code>deluca.envs.classic.Pendulum(*args, **kwargs)</code>	
<code>deluca.envs.classic.PlanarQuadrotor(*args, ...)</code>	
<code>deluca.envs.LDS(*args, **kwargs)</code>	
<code>deluca.envs.lung.Lung(*args, **kwargs)</code>	Todos:
<code>deluca.envs.BalloonLung(*args, **kwargs)</code>	Lung simulator based on the two-balloon experiment
<code>deluca.envs.DelayLung(*args, **kwargs)</code>	
<code>deluca.envs.LearnedLung(*args, **kwargs)</code>	

1.3 core

<code>deluca.core.JaxObject(*args, **kwargs)</code>

1.3.1 deluca.core.JaxObject

class deluca.core.JaxObject (*args, **kwargs)

Public Data Attributes:

name
attrs

Public Methods:

<code>__new__(cls, *args, **kwargs)</code>	For avoiding super().__init__()
<code>__init_subclass__(*args, **kwargs)</code>	For avoiding a decorator for each subclass
<code>__str__()</code>	Return str(self).
<code>__setattr__(key, val)</code>	Implement setattr(self, name, value).
save(path)	
load(path)	
throw(err, msg)	

classmethod `__init_subclass__` (*args, **kwargs)

For avoiding a decorator for each subclass

static `__new__` (cls, *args, **kwargs)

For avoiding super().__init__()

`__setattr__` (key, val)

Implement setattr(self, name, value).

`__str__` ()

Return str(self).

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Version 2.0

Date January 2004

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```

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