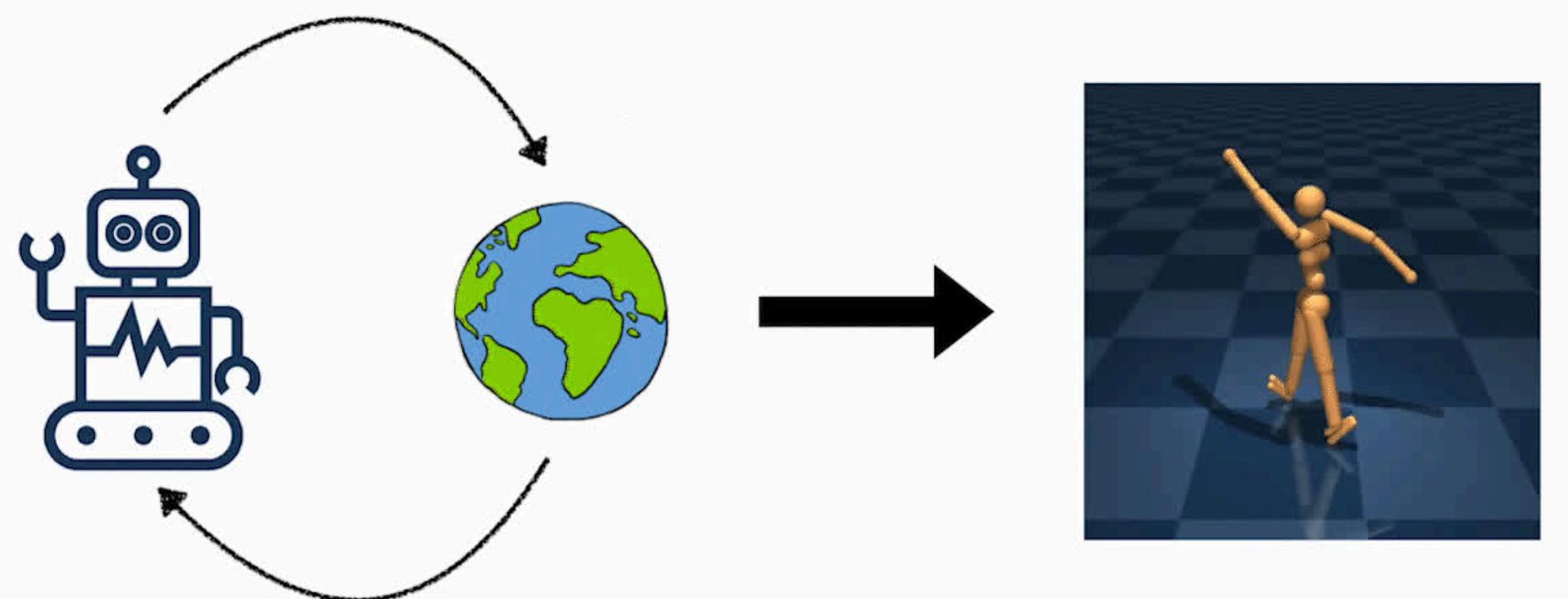


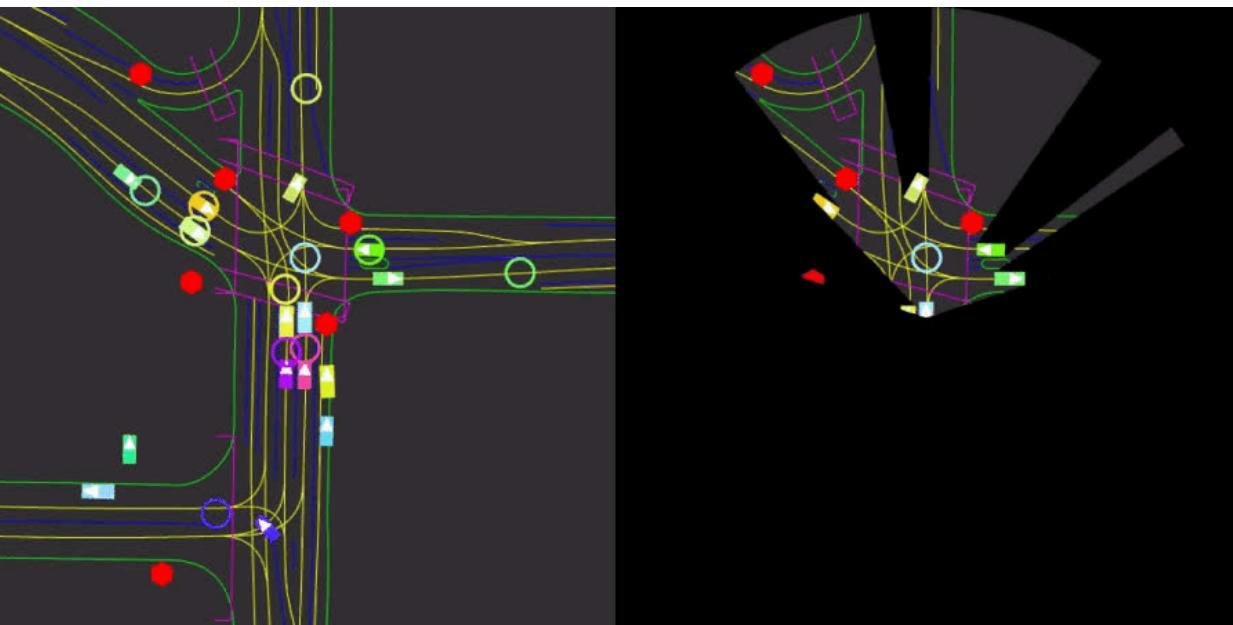
# Reward Rush

- A Month-long hands-on competition to learn and apply Reinforcement Learning.
- **Goal:** Train agents across multiple Gymnasium environments.
- Participants compete to achieve the highest rewards & demonstrate understanding.
- **Open to all years &** teamwork encouraged (2 members at most).

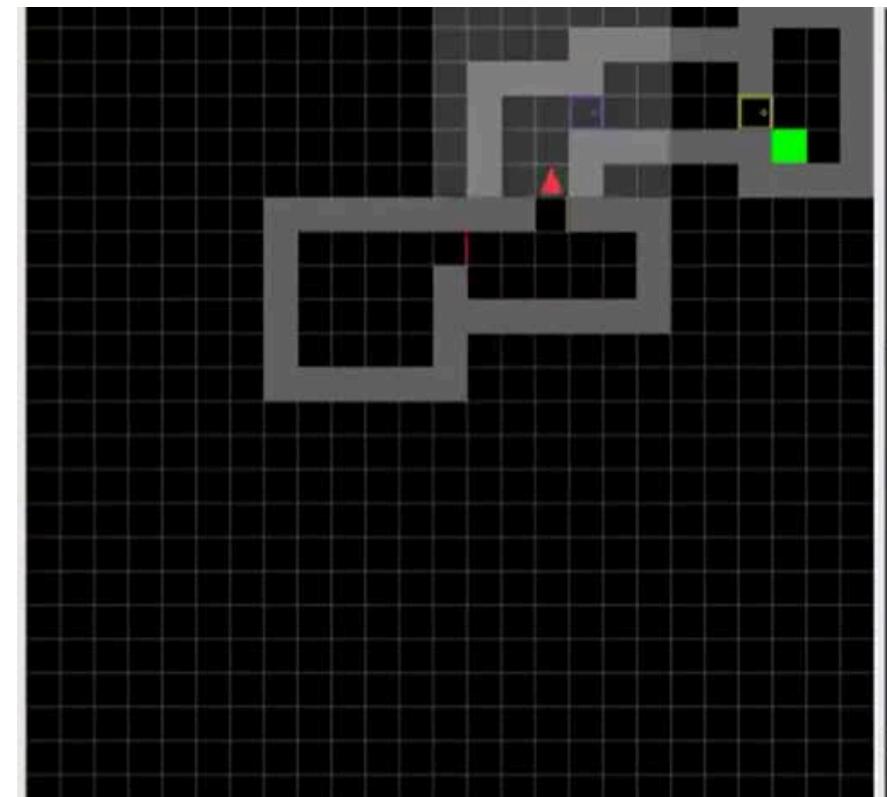
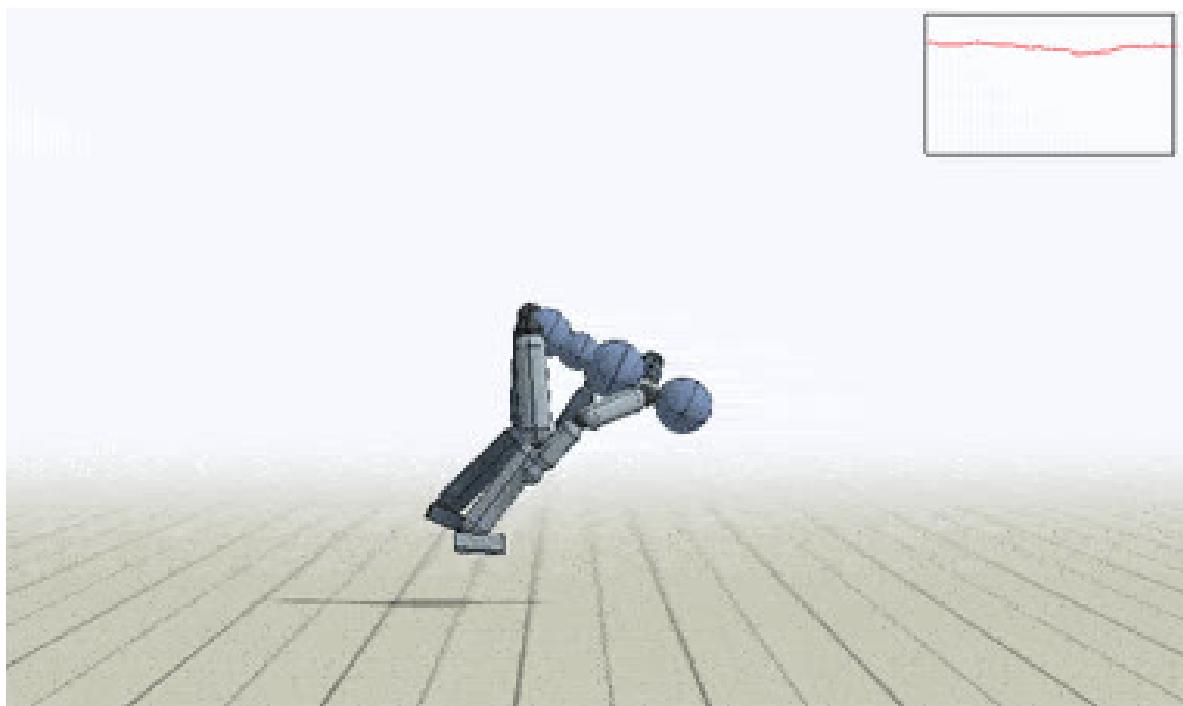


# Bots Hitting the Gym (Literally)

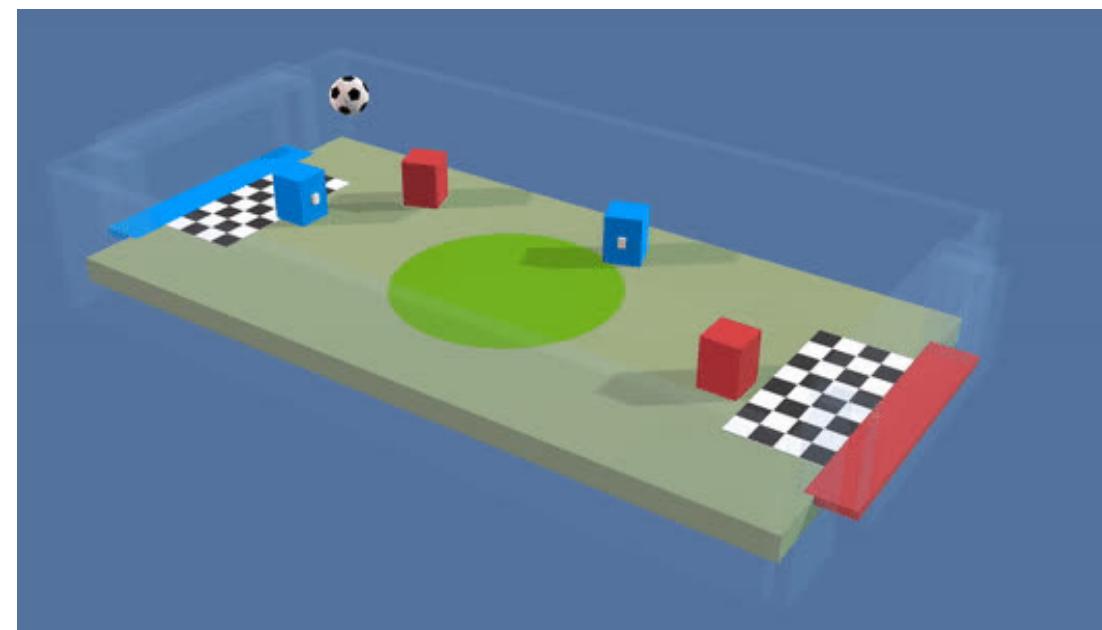
Sensor-Driven  
Interaction &  
Navigation Tasks



Complex Motion &  
Locomotion Tasks



Minimalistic gridworld  
environment for OpenAI  
Gym



Physics-based  
Continuous Control  
Environments

# Challenge Timeline





# Competition Structure & Rules

## Environments

- **Easy:** FrozenLake, Taxi
- **Medium:** Slippery FrozenLake, LunarLander, CartPole, MountainCar Continuous
- **Hard:** HalfCheetah, Walker
- **Very Hard :** Humanoid



# Frozen Lake

Frozen Lake involves crossing the lake while avoiding **Holes** and reaching the **Goal Point** with a Possibility of **Slipping**.

You will have to train **2 agents**:

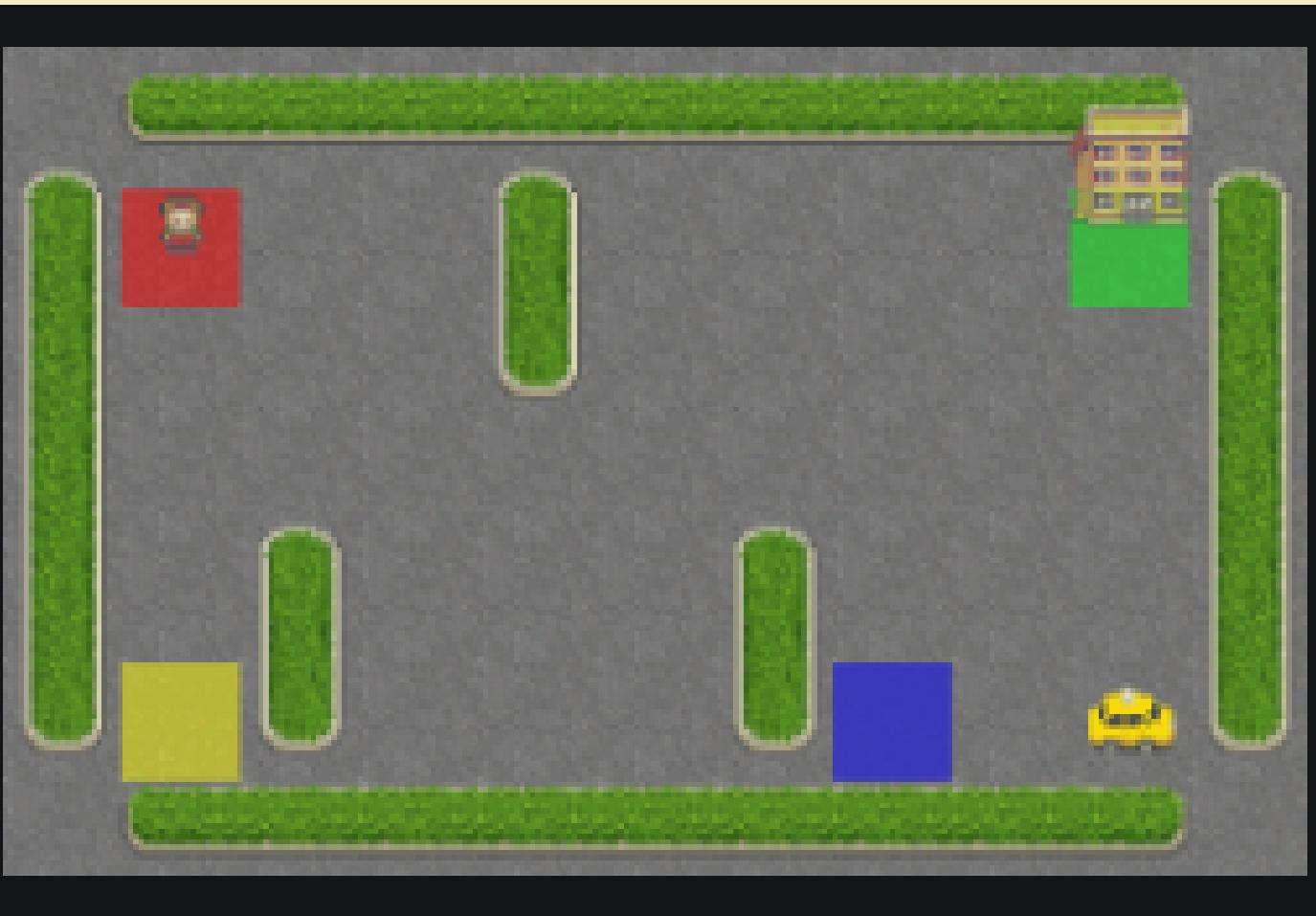
1. No slipping
2. Slipping Probability of **33%**

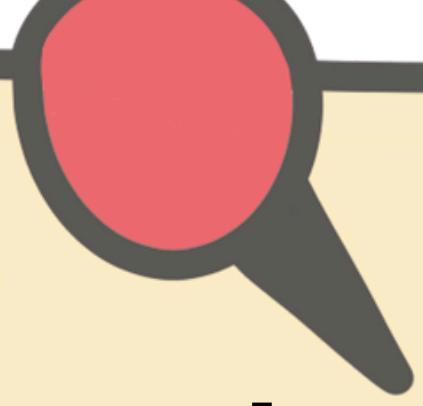


# Taxi

The taxi starts off at a random location in the **5x5 grid** with passenger at one of the designated locations.

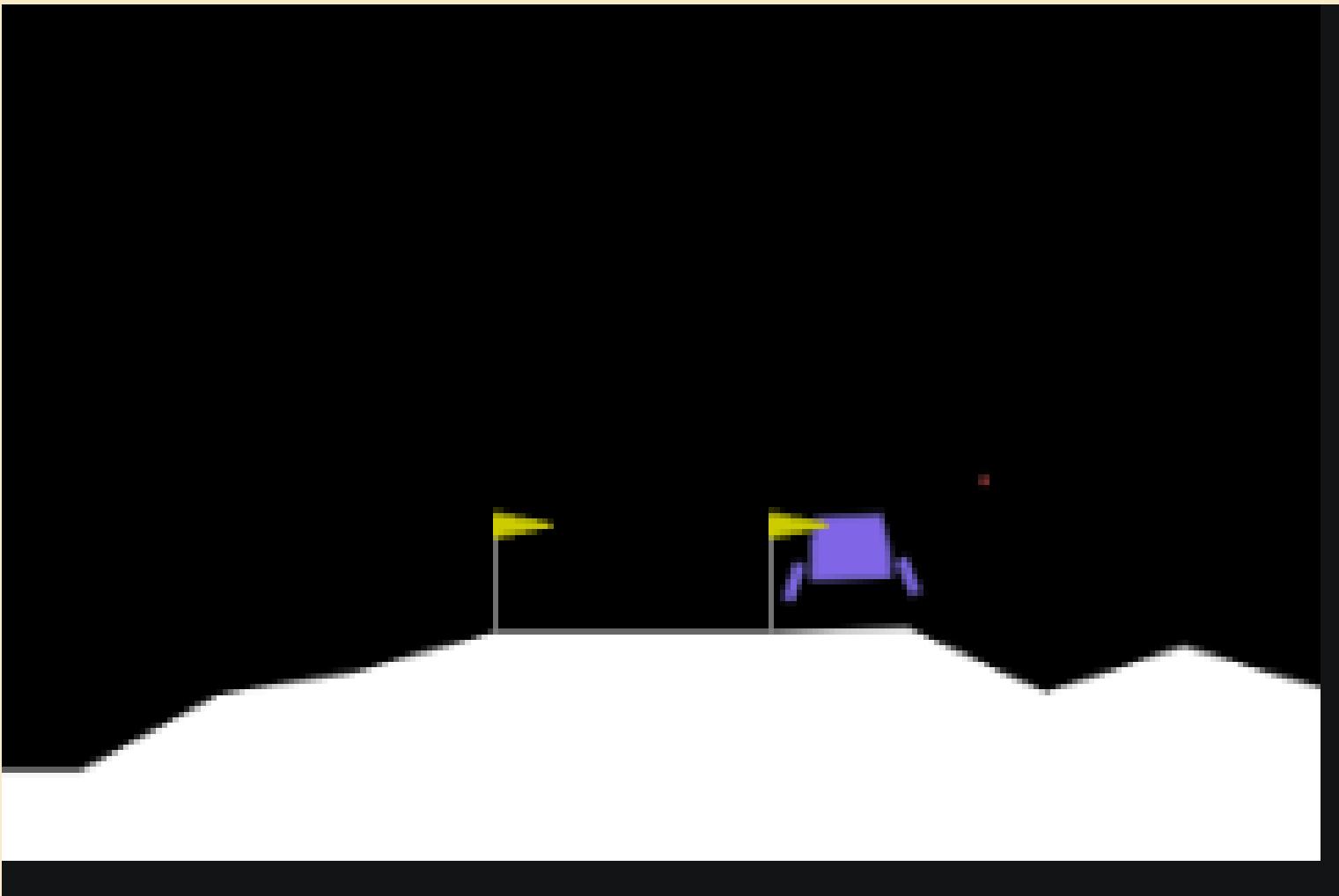
Your task is to Pick up the passenger and drop at **random** the goal location.





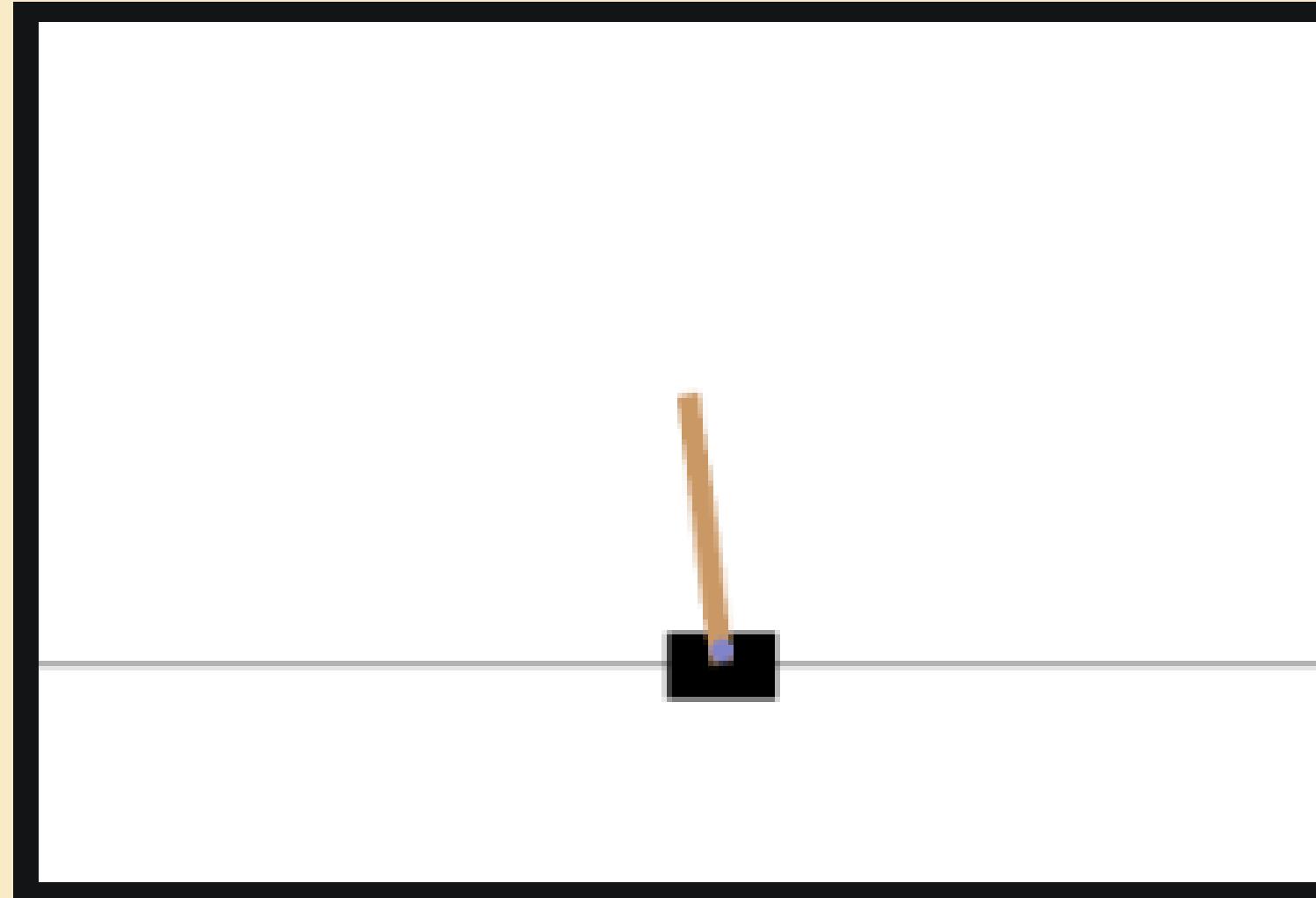
## Lunar Lander

Your goal is to train a agent  
to land the rocket in the  
designated are using the **3**  
**thrusters**





## CartPole

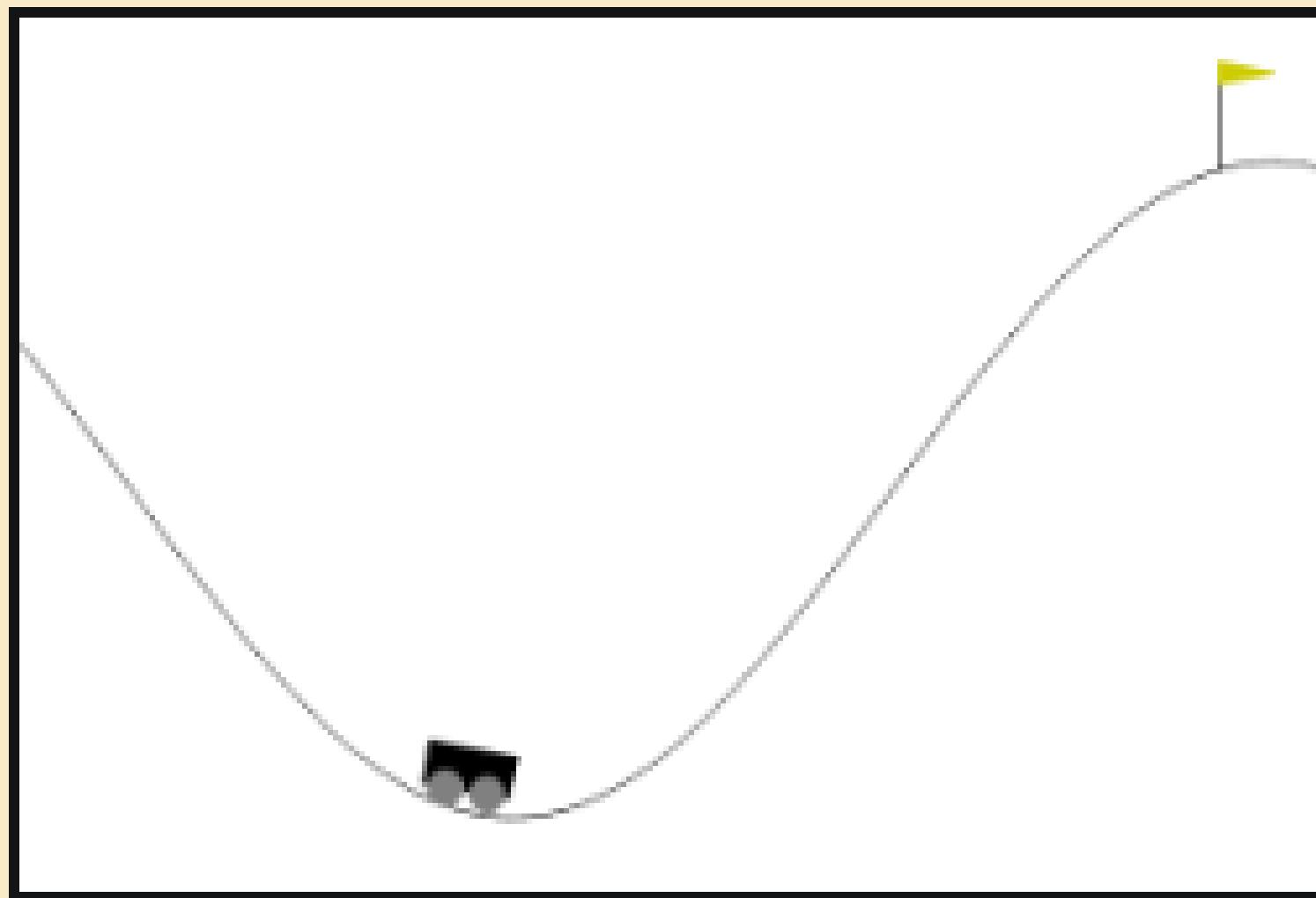


**Balance** a Pole on a Cart on a frictionless surface  
by moving the cart either **left or right**

# Continuous Mountain car

Reach the top of the Sinusoidal valley by accelerarating either in left or right directions

**Note: The action space is not fixed**

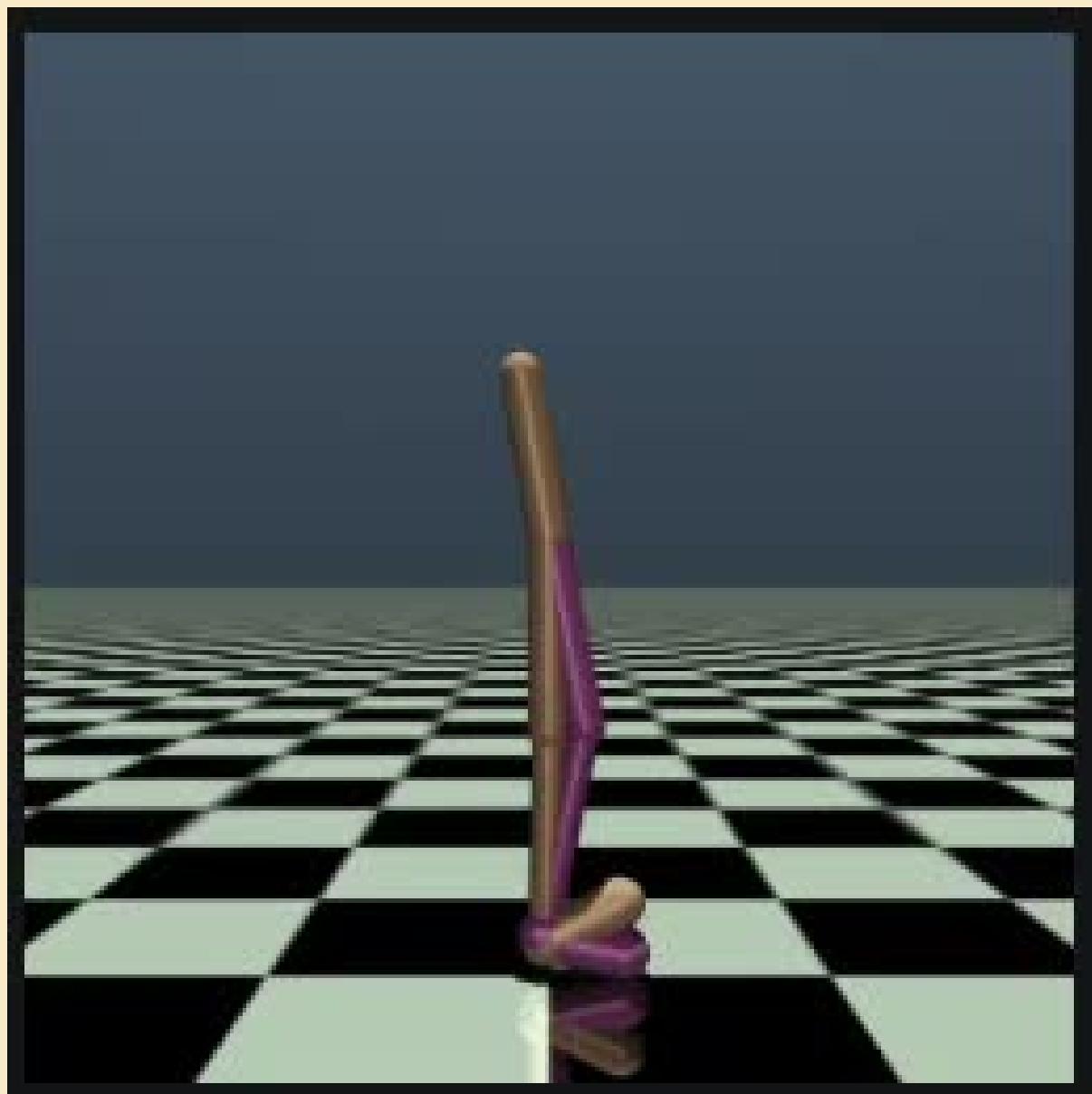




## Walker

The walker is a 7 body parts - **6 Hinge** Bipedal robot

Your goal again is to train a agent to make it move **rightwards** by applying torque on the hinges

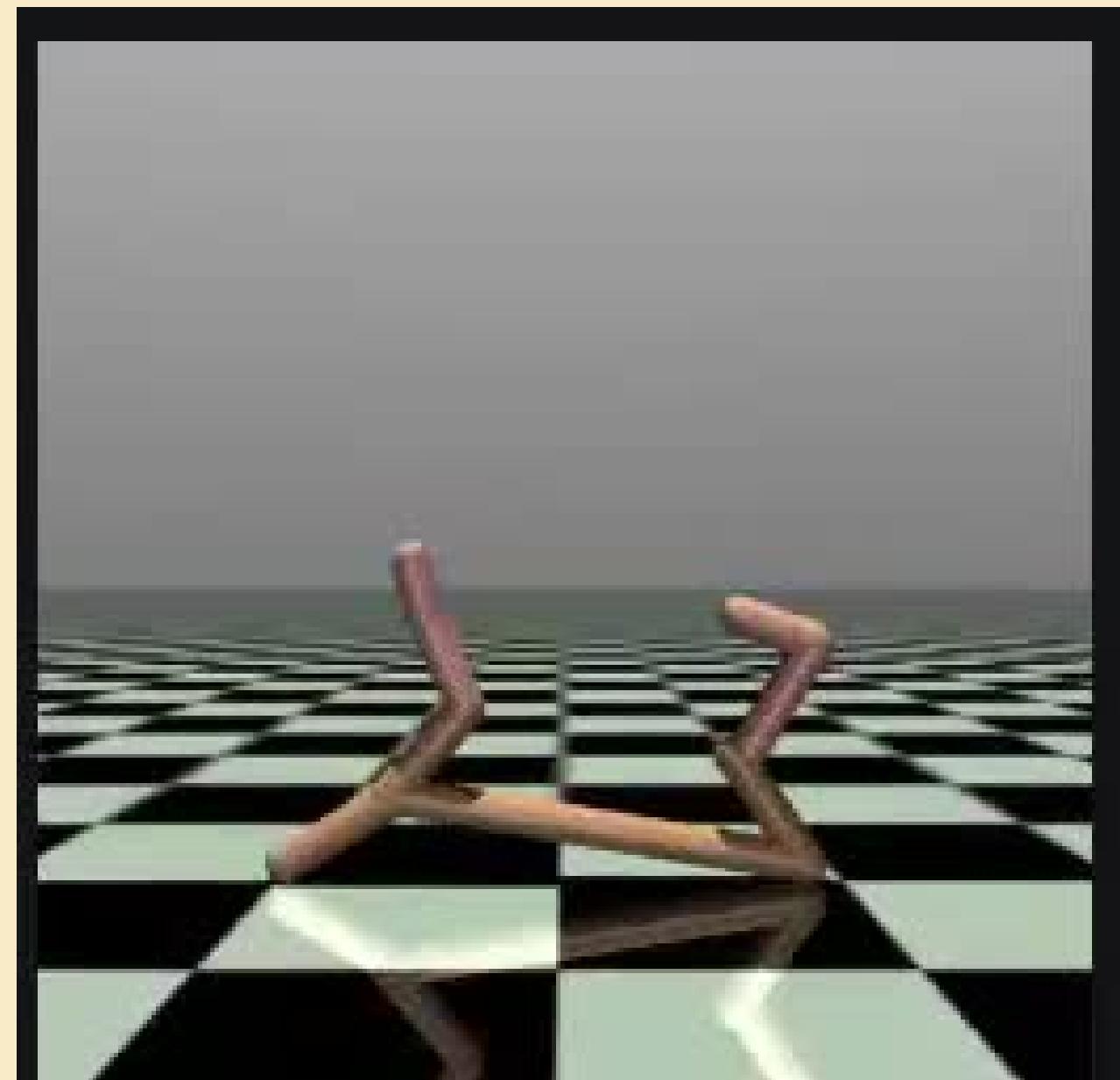




## HalfCheetah

The half cheetah is a 2-D robot with 9 parts and **8 joints**.

Your Goal is to make the cheetah move **rightwards as fast as it can** by applying torque at the joints

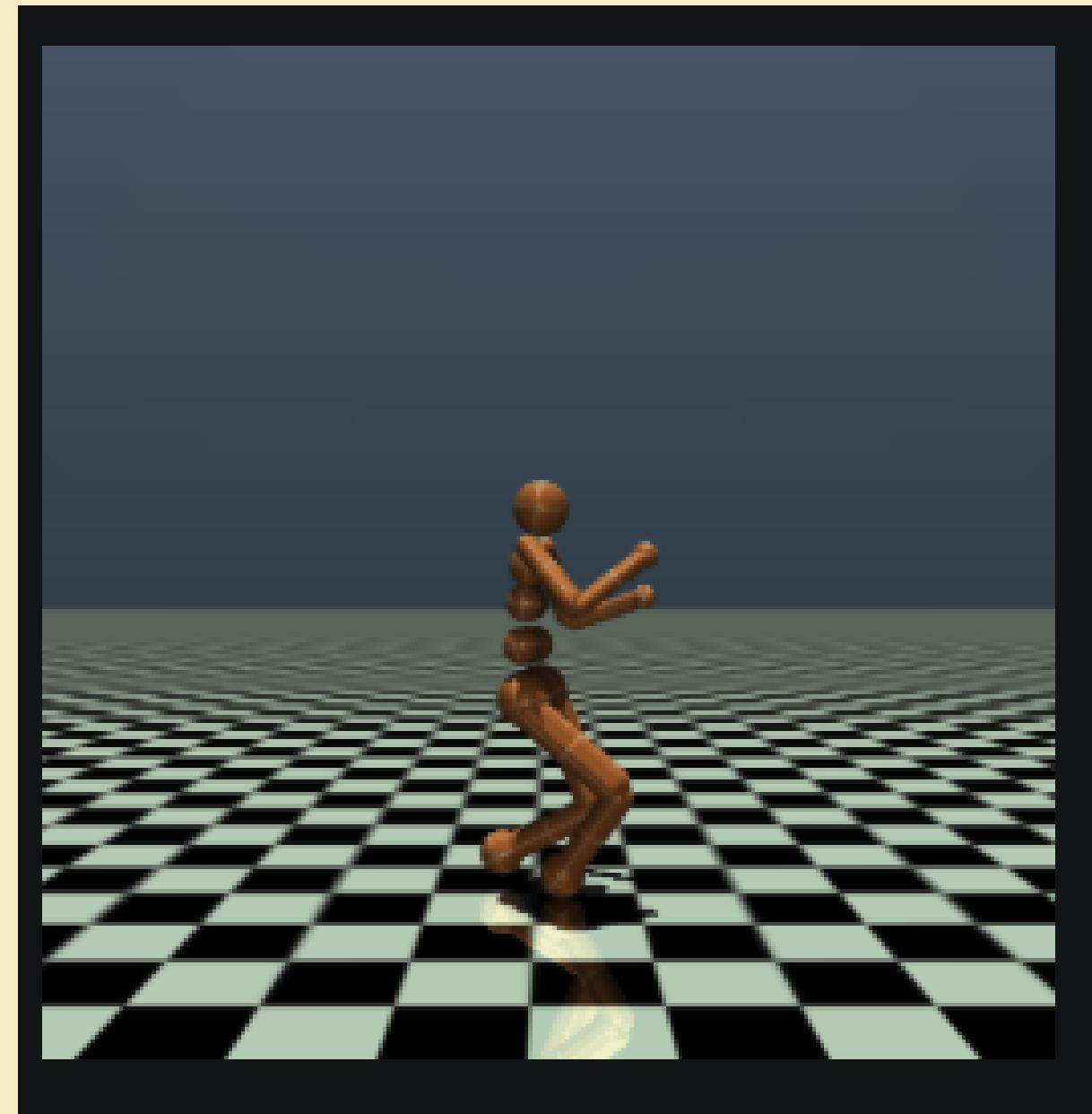


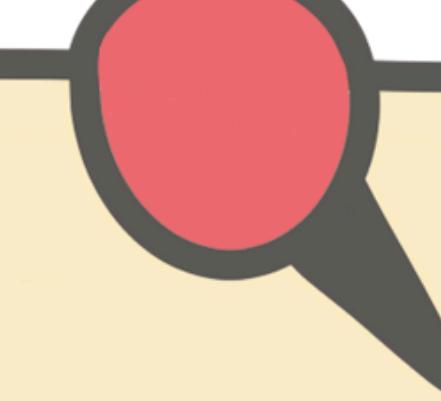


# Humanoid

The Humanoid is a 3-D Bipedal robot with **17 hinges**.

Your Goal is to walk forward without falling as fast as possible by applying torques at the hinges





# Competition Structure & Rules

## For Participants

- **Freshers:** Solve Easy + Medium + report from each category
- **2nd/3rd years:** Solve Easy + Medium + Hard
- Optional bonus: Attempt Very Hard for special mention Submission
- Submit trained models via HuggingFace repo link
- Leaderboard evaluates your models
- Reports judged on understanding + insights + innovation