# What is a state/observation in Ant-v2?

## Code

<https://gym.openai.com/envs/Ant-v2/>

## Summary

The elements of the observation/state space are as follows:

[0] z position of the torso

[1-4] (x,y,z,w) orientation of the torso

[5-12] 8 joint angles (order: hip\_1, ankle\_1, hip\_2, ankle\_2, hip\_3, ankle\_3, hip\_4, ankle\_4)

[13-15] (x,y,z) velocity of torso

[16-18] (x,y,z) angular velocity of torso

[19-26] 8 joint velocities (order: hip\_1, ankle\_1, hip\_2, ankle\_2, hip\_3, ankle\_3, hip\_4, ankle\_4)

[27-110] cfrc\_ext: 6 for the ground link, 6 for the torso link, and 6 for each of the 12 leg links (3 links per leg)

Total = 111 elements

# What is a state/observation in FetchReach-v1?

## Code

<https://gym.openai.com/envs/FetchReach-v1/>

## Summary

[0-2] (x,y,z) position of the gripper

[3-4] two measures of the gripper's opening

[5-7] (x,y,z) velocity of the gripper

[8-9] two measures of the velocity of the gripper's opening/closing

[10-12] desired (x,y,z) goal position