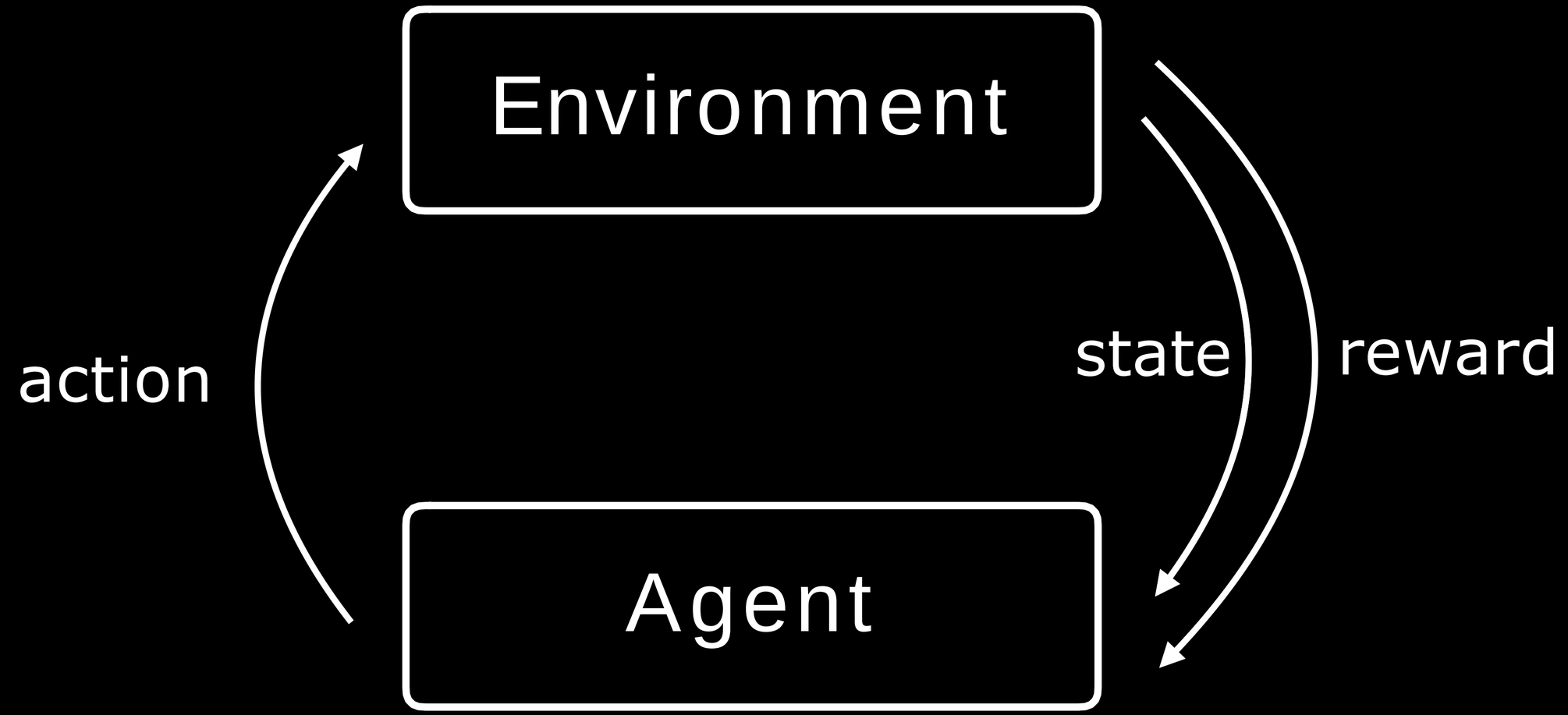
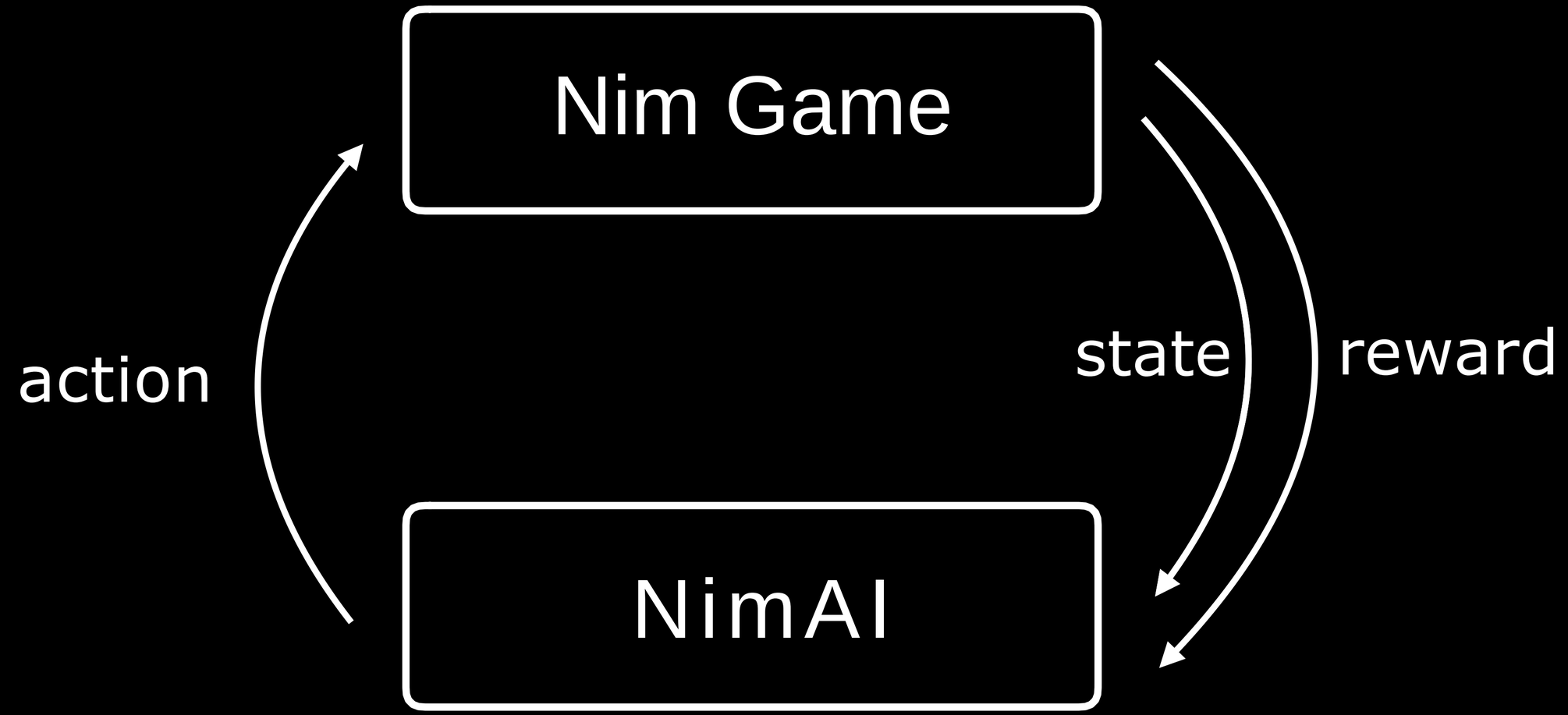
python + AI

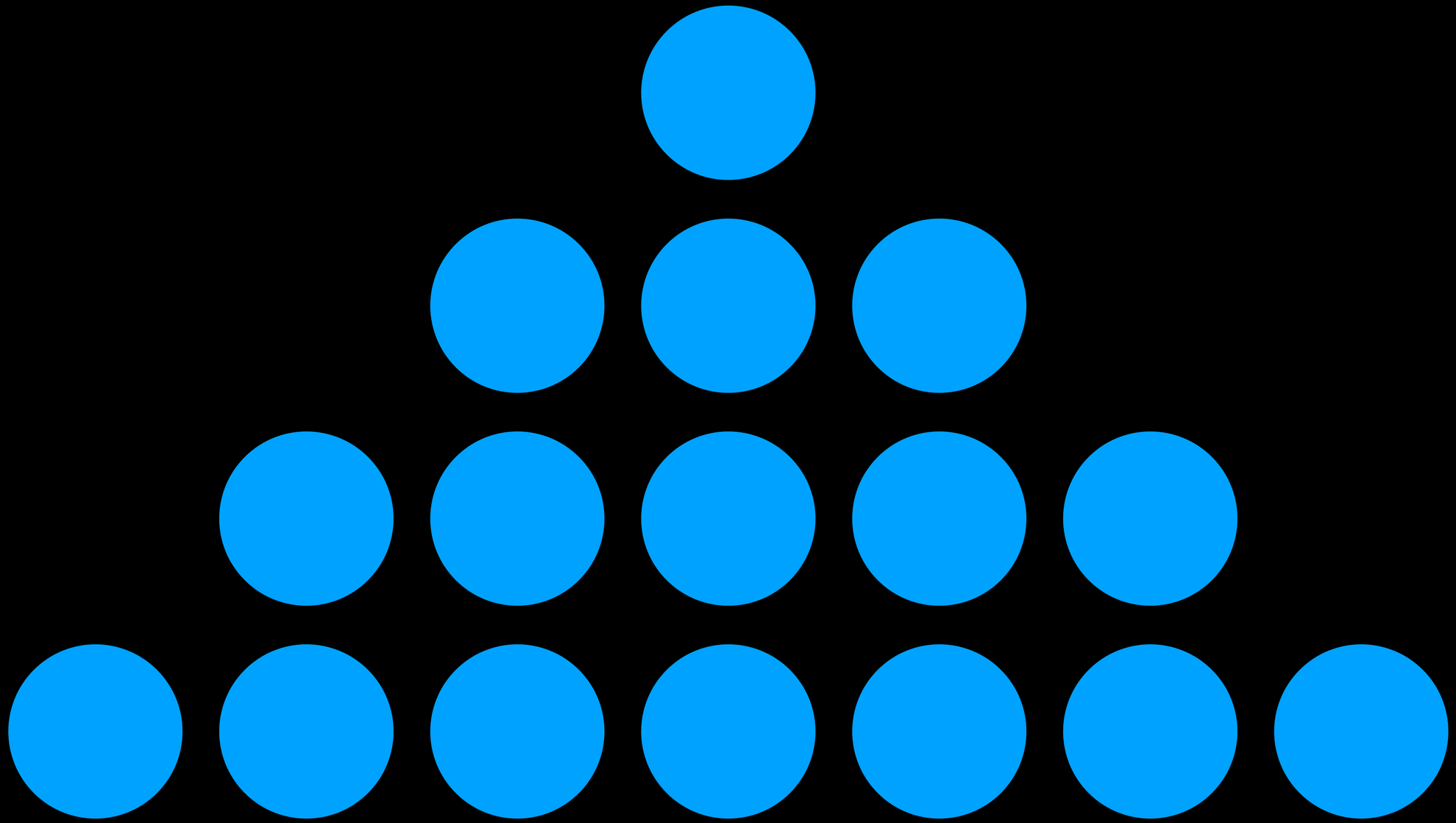
# Introduction to Artificial Intelligence with Python

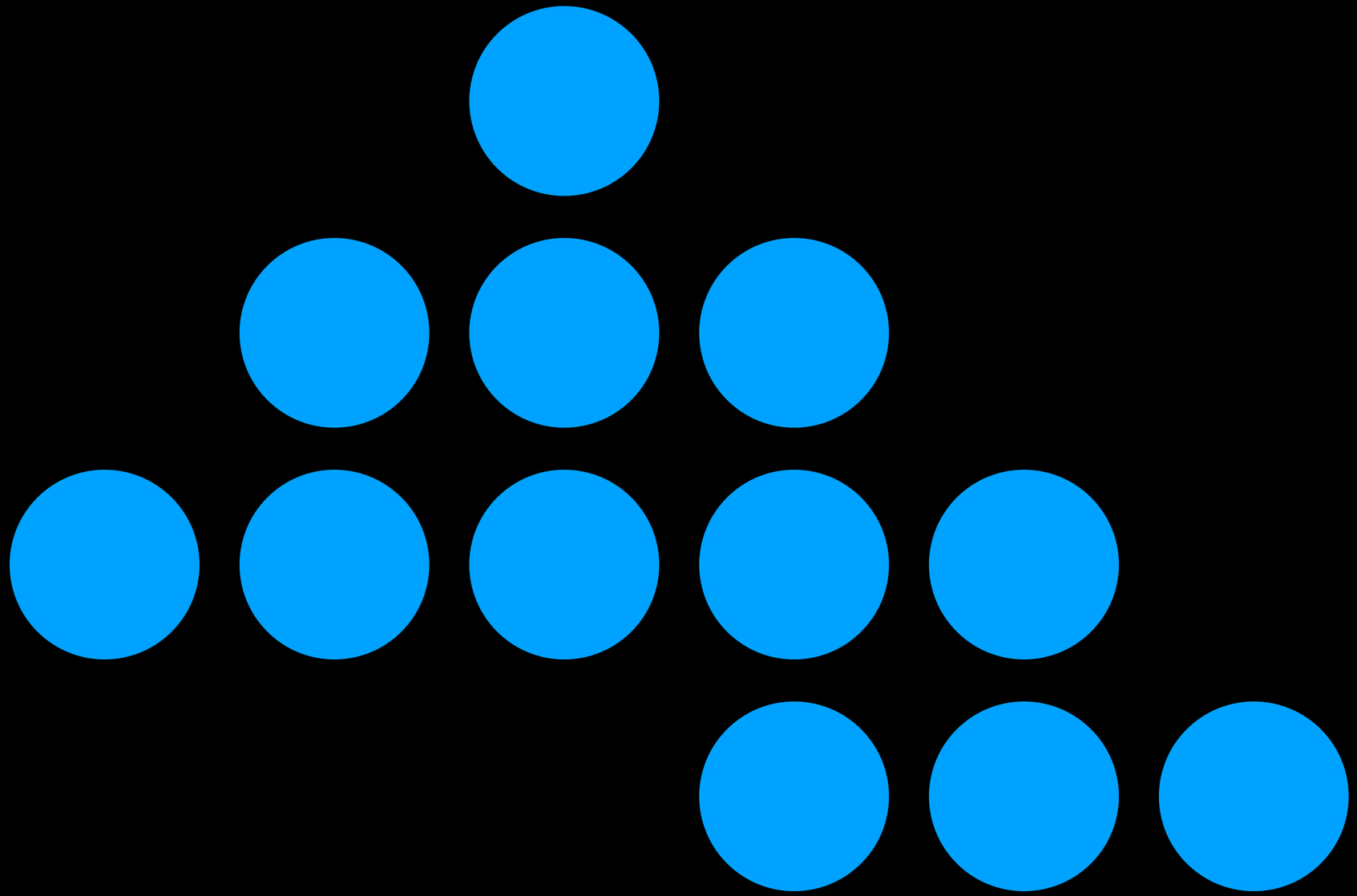
# Reinforcement Learning

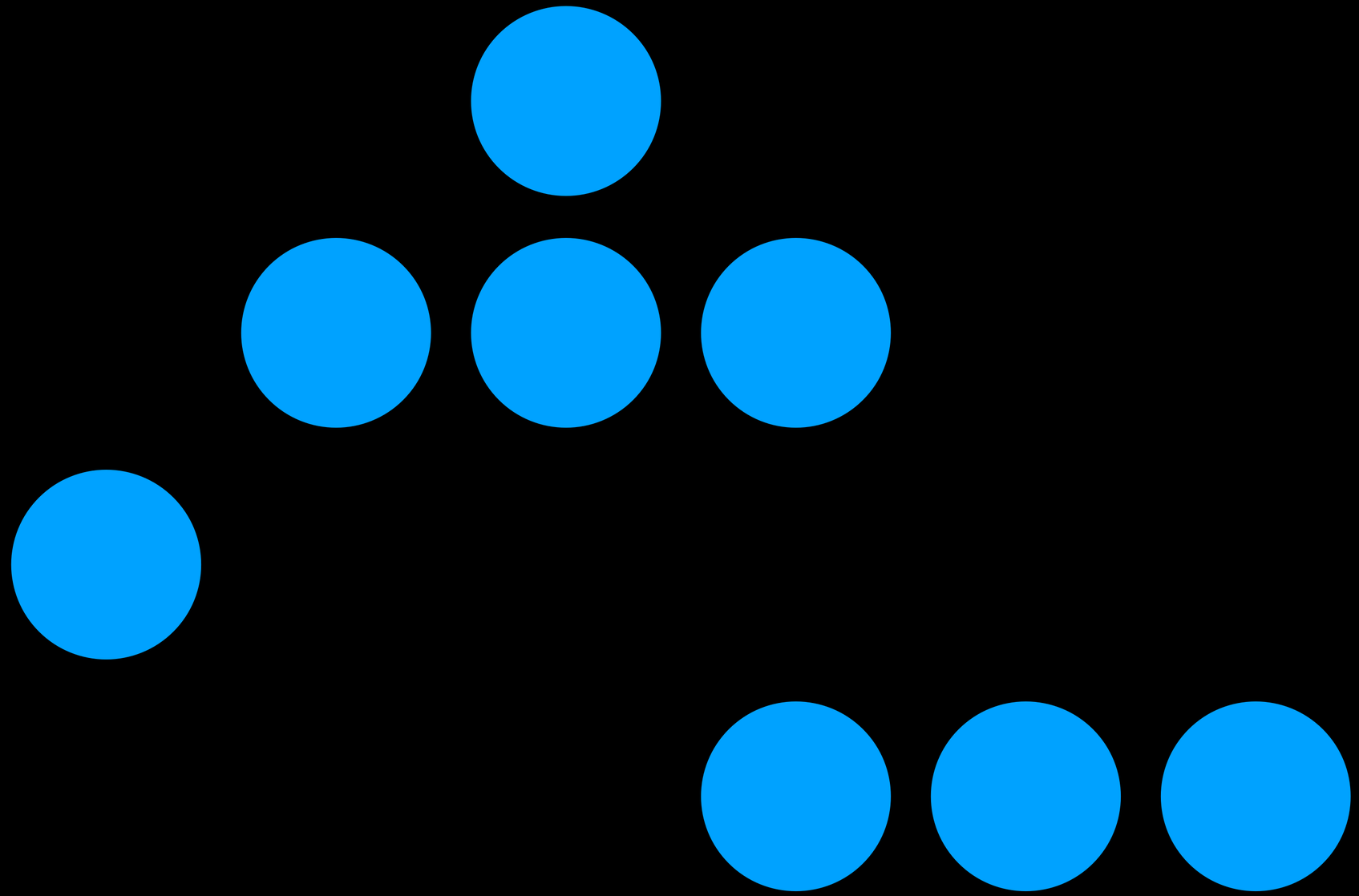

Environment
action
state
reward
Agent

# Nim


Nim Game
action
state
reward
NimAI



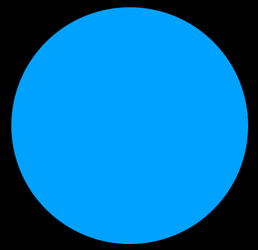





python


python


python



# Data Model

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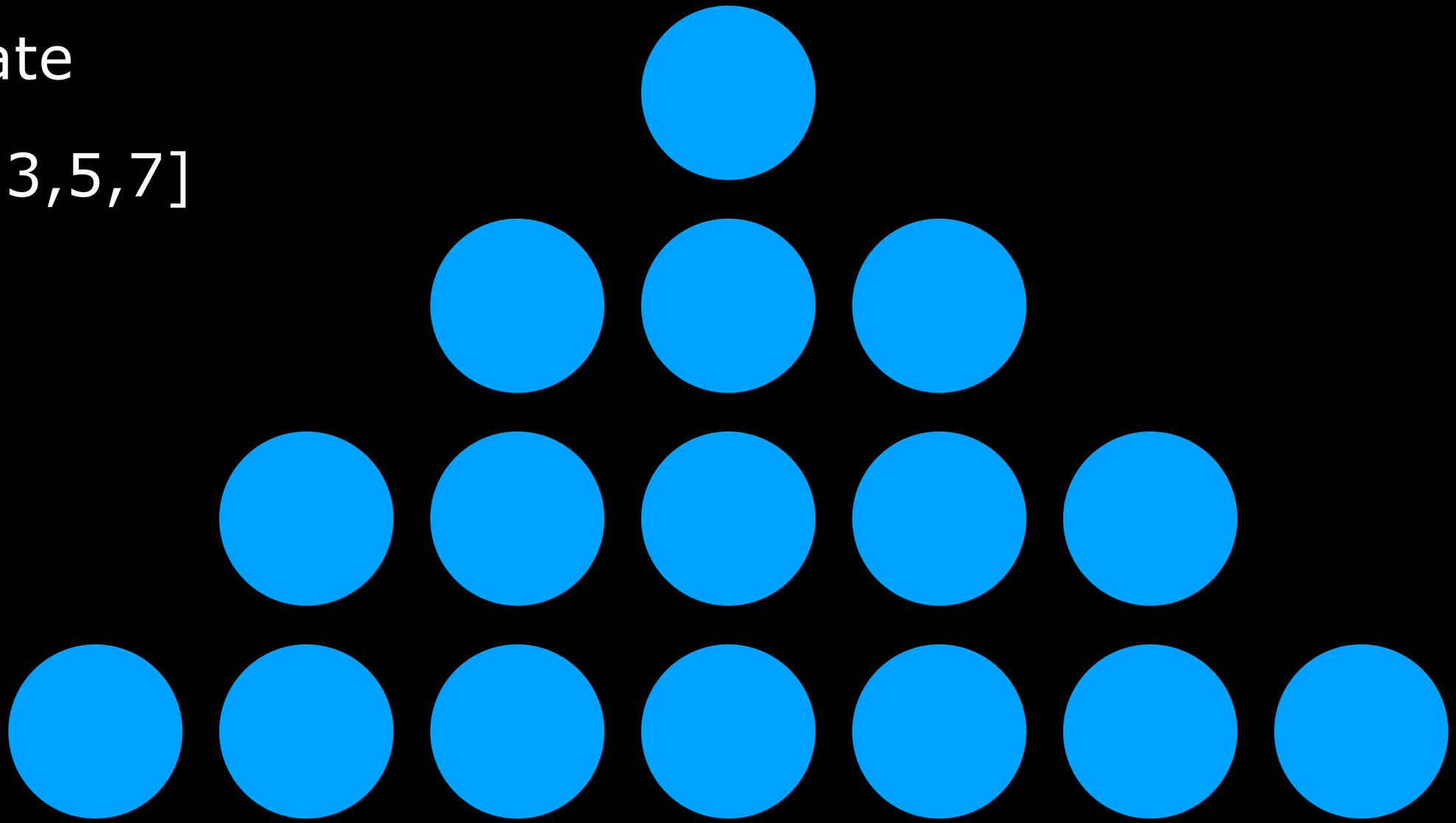
# State

[1,3,5,7]



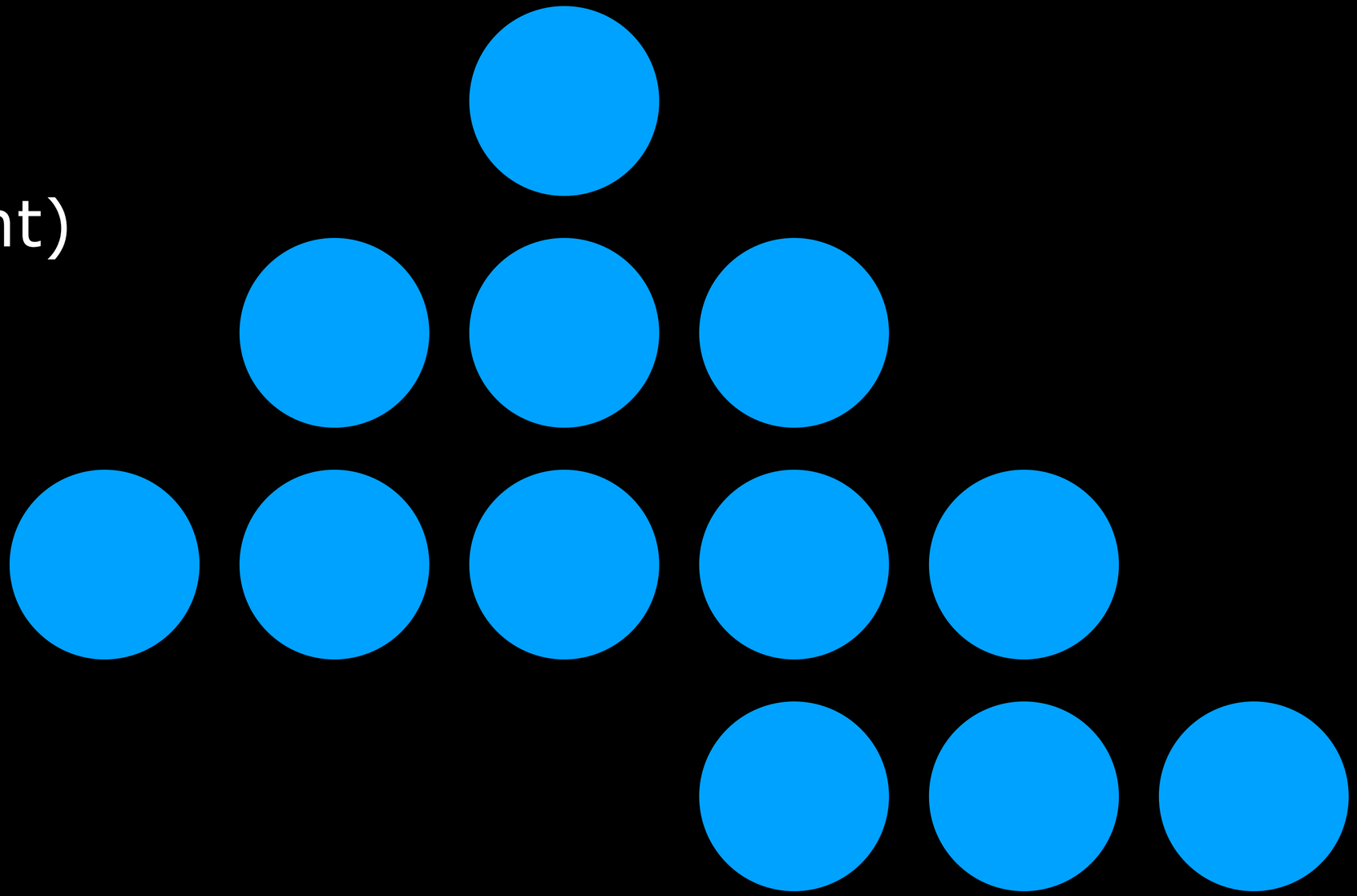
Action

(3,4)

(pile, count)

State

[1,3,5,3]



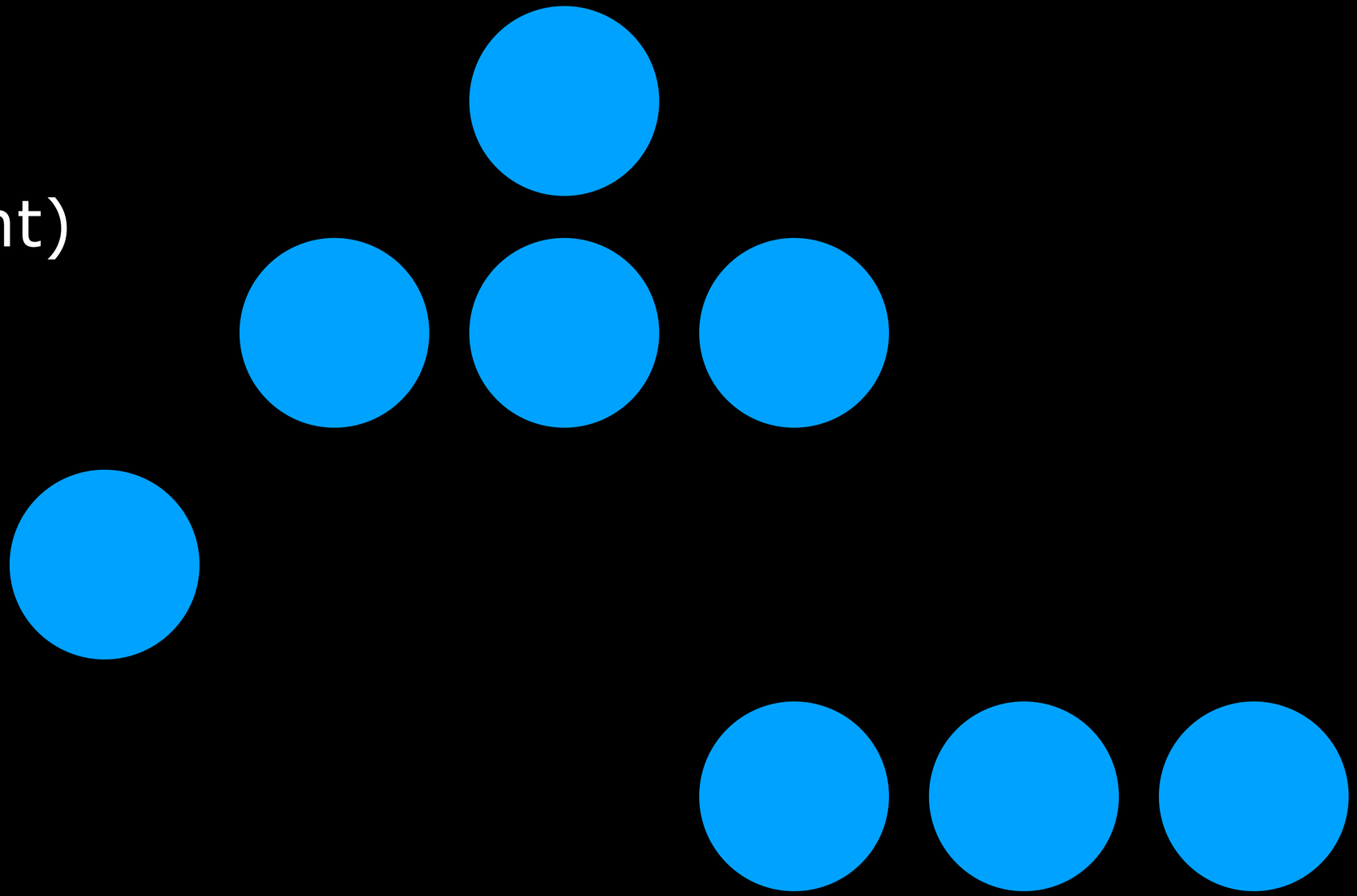
Action

(2,4)

(pile, count)

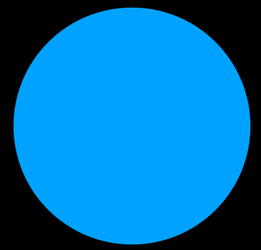
State

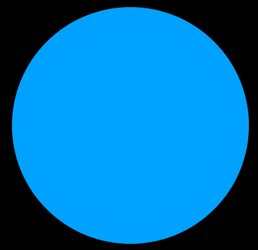
[1,3,1,3]

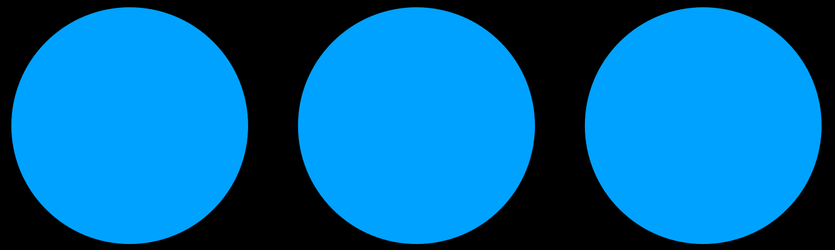


# Possible Actions

(0,1)
(3,1)
(3,1)
(3,2)
(3,3)







# Reward

( state, action ) : q value

( (1,0,0,1,3), (4,2)) : 0.75

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