

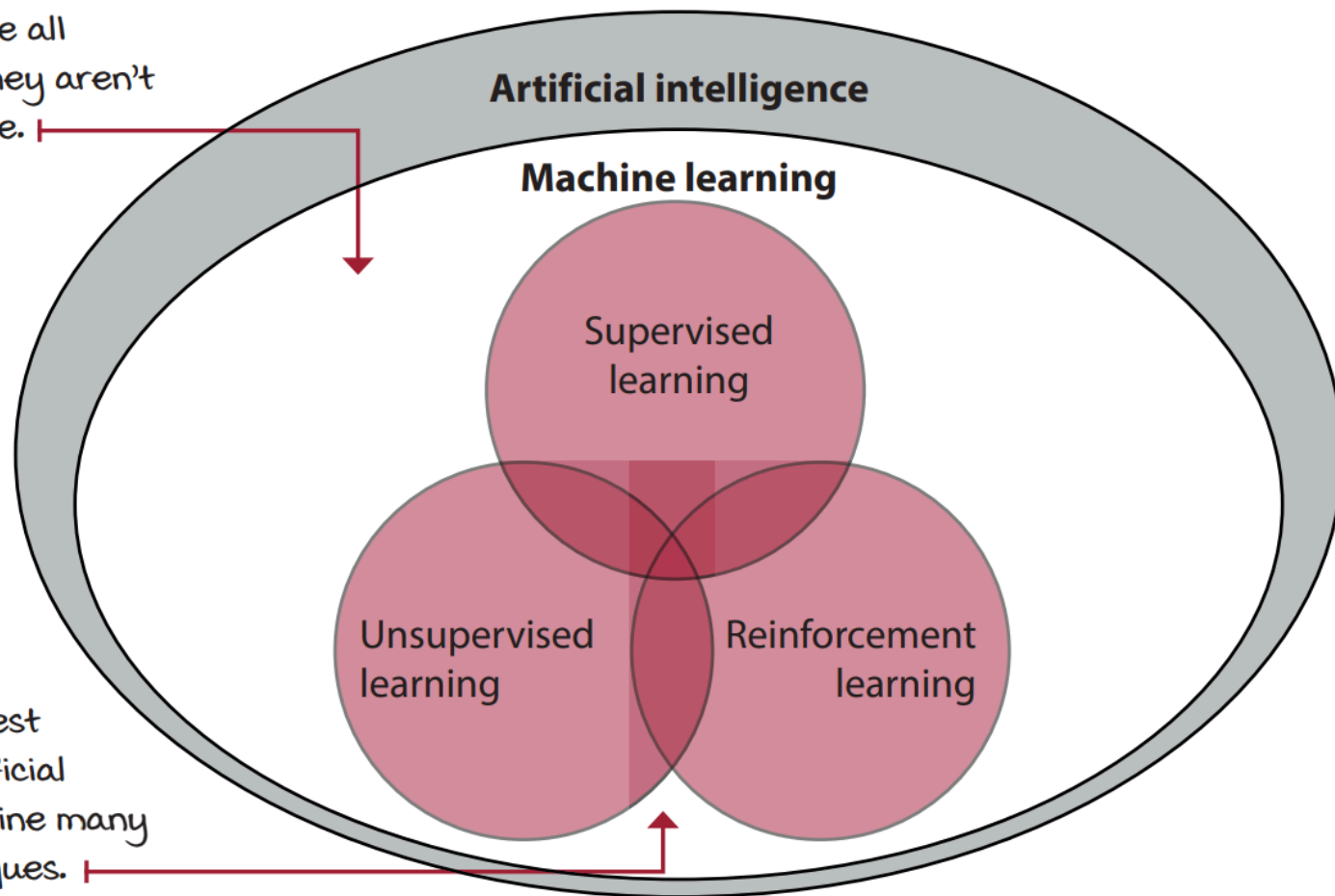
Reinforcement Learning Training 2025

Round 1

Where is RL in ML?

Main branches of machine learning

(1) These types of machine learning tasks are all important, and they aren't mutually exclusive.



(2) In fact, the best examples of artificial intelligence combine many different techniques.

Supervised learning

- We know *all* the right answers (label)
- We teach machine.

Unsupervised learning

- We don't know the answer.
- We let machine find structure in the data.

Reinforcement learning

- We don't know *all* the right answer
 - but we have a way to conduct *trial-and-error* experiments.
- We let the machine *discover* the answers.

Applications

- ChatGPT
 - Enhanced by reinforcement learning through a technique called Reinforcement Learning from Human Feedback (RLHF). [\[1\]](#) [\[2\]](#)
- Spot
 - Utilize reinforcement learning (RL) to enhance their locomotion and manipulation capabilities. [\[3\]](#)

Main idea of RL

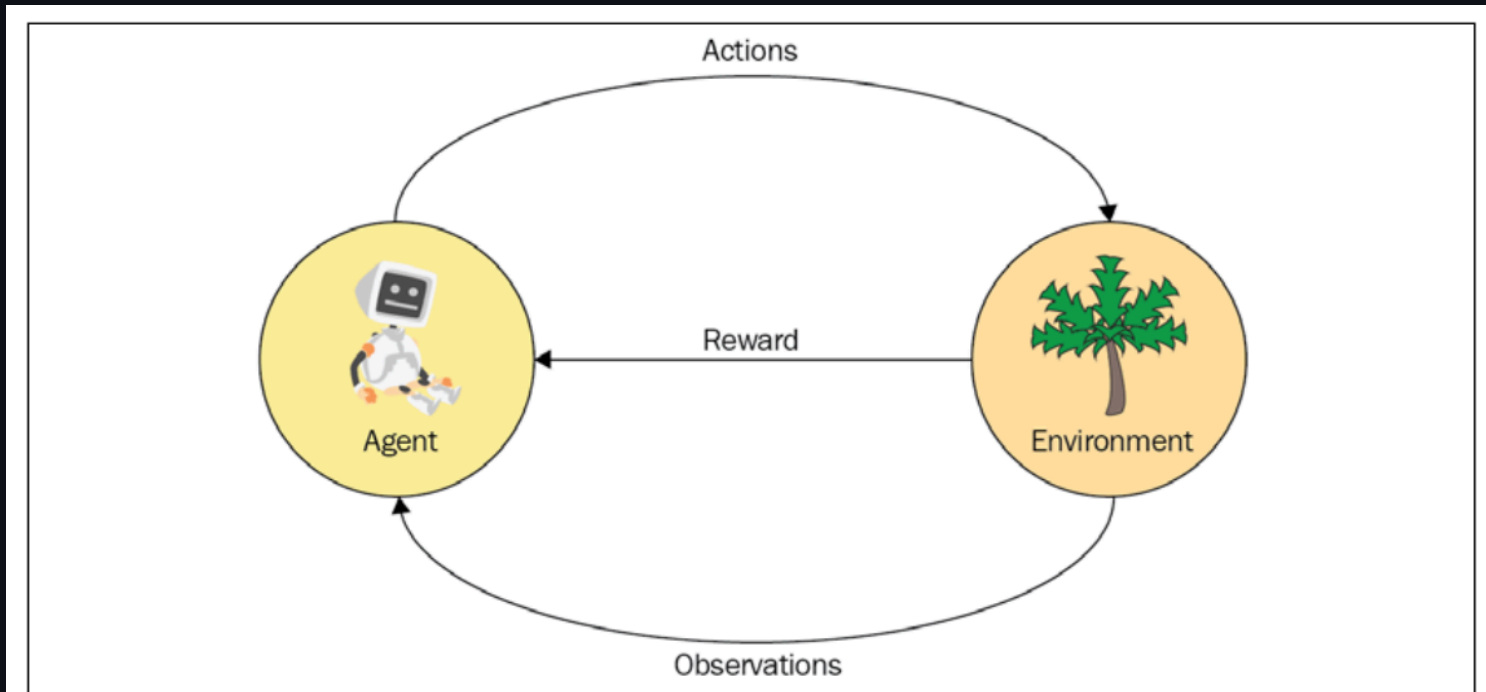


Figure 1.2: RL entities and their communication channels

Types of RL

