

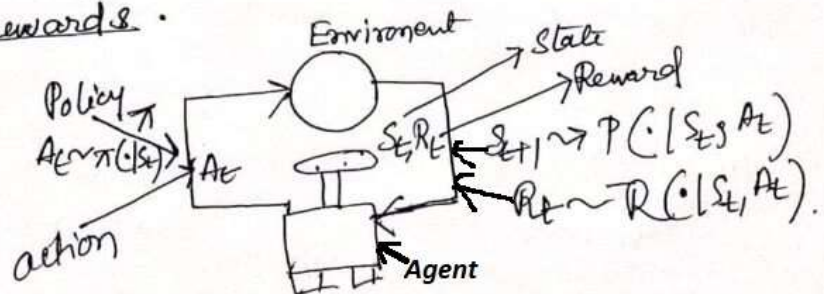
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- The dog had learned to associate the bell (neutral stimulus) with food (unconditioned stimulus) and thus responded (salivated) to the bell alone. The bell became a conditioned stimulus.

Why RL

A recent one is Chat GPT.

- Complex Dynamics
— Helicopter control
- Complex Workspace
- Stochastic sensing & actuation.

Definition: RL is a branch of machine learning where an agent learns to make sequential decisions by interaction with an environment to achieve a goal. Unlike supervised learning (which learns from labeled data), RL learns from experience & feedback in the form of rewards.



• Key features of RL:

- Sequential decision making: Each action affects future states & rewards
- No direct supervision: The agent learns by trial and error
- Goal-directed behavior: maximize cumulative reward
- Environmental feedback: reward signal & error