

Task 3:: Dyna-Q, Integrating Learning with Planning

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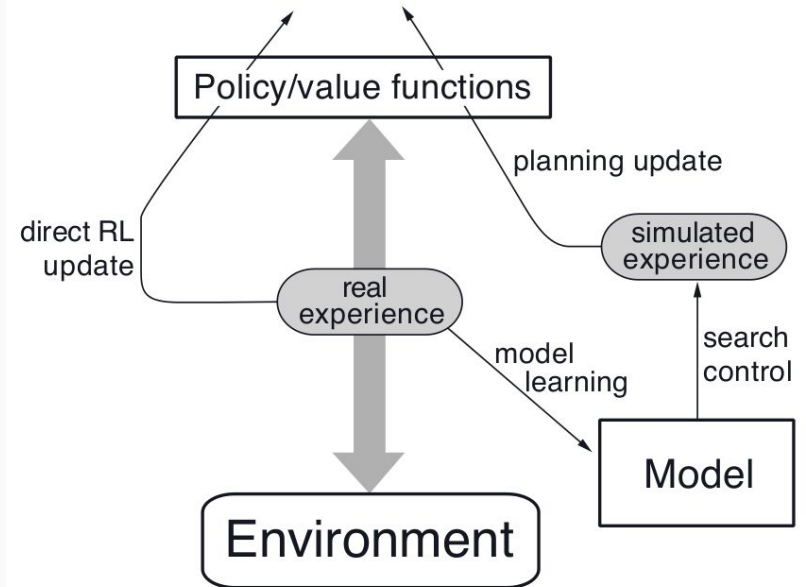
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A decorative light blue triangle is located in the bottom right corner of the slide, pointing towards the top right.

What is Dyna-Q

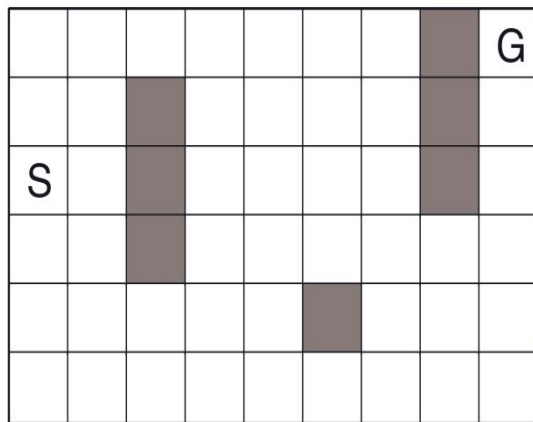
- A simple architecture integrating the major functions needed in an on-line planning agent.
- Integrates and uses both learning and planning to take actions.



Demonstration

Environment taken is Dyna
Maze

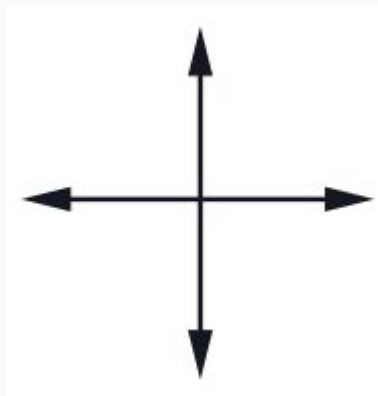
Start
State



End
State

Demonstration(1)

Action Set



Demonstration(2)

Settings:

- Reward is zero on all transitions except for the one to the goal state.
- Discount factor (γ) = 0.95.
- Step size (α) = 0.1
- Action selection = GLIE

Demonstration(3)

DEMO

Questions

