Tutorial - Week 2

History & Future of AI, Agents & Environments

Activity 1

Consider a game of checkers and two options of programmed players. One program selects a move by searching through all possible moves and choosing the best one. The other program makes its move based on experience, playing numerous games and learning which moves are better.

a.   What are the advantages and disadvantages of each program?

b.   Which of these programs resembles the concept of "Chinese Room"?

c.   Considering 4 perspectives on AI definition, how would you describe each of these programs.

Activity 2

Consider three systems: (1) a smart car, (2) a smart home assistant, and (3) a breakout player.

a.   Describe the system of your choice in PEAS (performance measure, environment, actuators, sensors) terms.

b.   For the same system describe its environment and justify your choice:

   - simulated or situated/embodied
   - static or dynamic
   - discrete or continuous
   - fully or partially observable
   - deterministic or stochastic
   - episodic or sequential
   - known or unknown
   - single-agent or multi-agent

Activity 3

Consider a checkers and a breakout programmed players.

a.   Which one can be implemented as a reactive agent and why?

b. Which agent type would be the most appropriate for the other programmed player and why?

Activity 4

Download *stock.ipynb*, open terminal or cmd, navigate to the folder where stock.ipynb is located and then run:

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jupyter notebook
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