

Notes

Russell & Norvig

Artificial Intelligence: A Modern Approach

|-----+-----+-----| | Humanly | Rationally | |-----+-----+-----| | Thinking | Cognitive Science | (Not very useful) | |-----+-----+-----| | Acting | Turing Test (too hard) | YES | |-----+-----+-----|

Acts so as to achieve the best outcome, or, where there is uncertainty, the best expected outcome

An Agent receives percepts through its sensors, and can cause an action through its actuators.

Performance Environment Actuators Sensors

Fully Observable: Can view all of the environment Partially Observable: Can view some of the environment Unobservable: Cannot view any of the environment

Single Agent Multi Agent * Competitive * Cooperative * Semi cooperative

Deterministic: Every action causes predictable results Stochastic: Actions cause unpredictable results

Static: Nothing happens until an action occurs Dynamic: Environment changes while waiting for action Semidynamic: Performance ranking is affected by time spent thinking

Discrete Continuous

Known Unknown

Types of agents

Reflex State-based Goal-based Utility-based Learning * Exploration vs Exploitation