1   Artificial Intelligence

- An agent is an entity that can perceive and act. This course is about designing rational agents.

- Rational behavior: doing the right thing.

- Environment Types: Fully observable; Deterministic; Episodic; Static, Discrete; Single-agent. The counter part: partially observable; stochastic; sequential; dynamic; continuous; multi-agent.

- An agent is anything that can be viewed as perceiving its environment through sensors and acting upon that environment through actuators.

2   Problem Solving

- A search problem consists of

  - a state space
  - a successor function (namely **update function** in data mining algorithm series)
  - a start state (**initial value**), goal test (**terminating value**) and path cost function (**we say weights in Graph Theory**)