

B4M36SMU

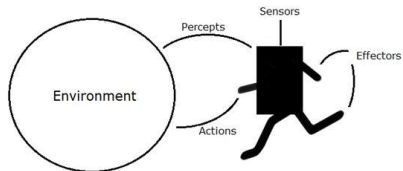
Second tutorial

Monday 20th February, 2017

What the course will be about?

- ▶ How to design a rational agent — an agent maximizing the expected utility.
- ▶ How such agent can learn from various types of experience.

Agent - PEAS description



[https://www.tutorialspoint.com/artificial_intelligence/artificial_intelligence_agents_and_environments.htm]

Example 1 - chess player PEAS description

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- ▶ What is environment?
- ▶ Chess board and chess pieces
- ▶ What are actuators?
- ▶ Player can do any valid move of his/her pieces.
- ▶ What are sensors?
- ▶ Anything that describes pieces location on the board.

Example 2 - taxi driver

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- ▶ Sensors
- ▶ cameras, sonar, speedometer, GPS, accelerometer, engine sensor, . . .

Example 3 - medical diagnosis system

?

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 - ▶ Known vs. unknown
- ▶ In the course we will go from easier cases to the harder ones.

Format of input knowledge in machine Learning

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- ▶ General graphs. Example: Drug discovery.
- ▶ First-order logical formulas. Example: Guiding automated proof assistants.

Format of output of machine-learned models

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- ▶ Classification

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- ▶ Regression

Format of output of machine-learned models

- ▶ Classification
- ▶ Regression
- ▶ Structured prediction

