

2 - Intelligent agents(IA)

Compile diagrams with

```
mmdc -e png --scale 3 -i diagram.md
```

Convert TikZ PDF to PNG:

```
convert -density 300 pic.pdf -quality 100 pic.png
```

Convert this markdown doc with:

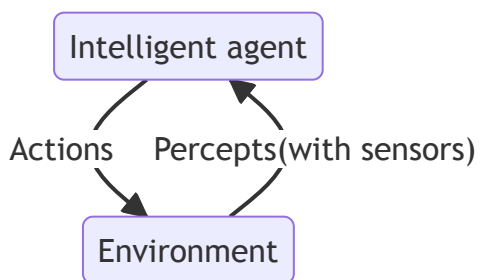
```
pandoc -F mermaid-filter diagram.md -o notes.pdf
```

ToC

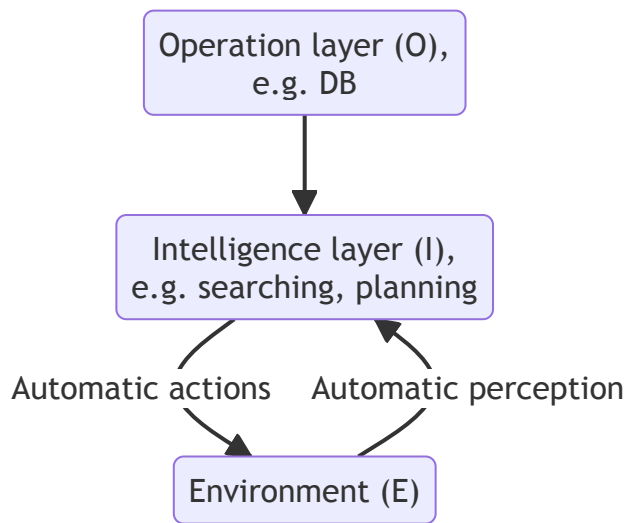
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Intelligent agent

Intelligent agent idea



Intelligent agent idea Nr. 2



We can describe an intelligent agent as a mathematical function which maps perceptions to the specific action:

$$f : P \rightarrow A$$

, where P is a perception set and A is an action set.

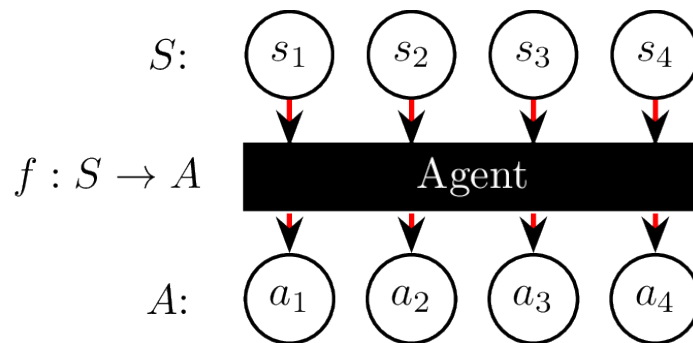
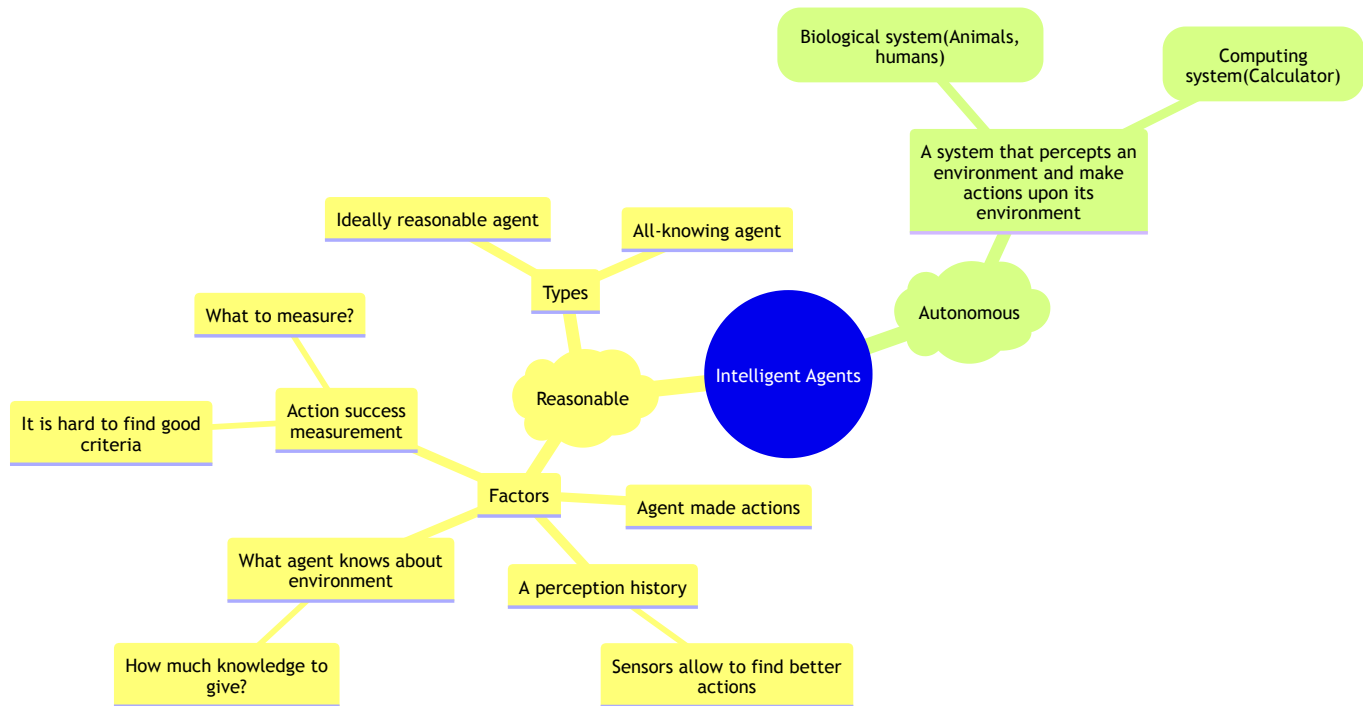


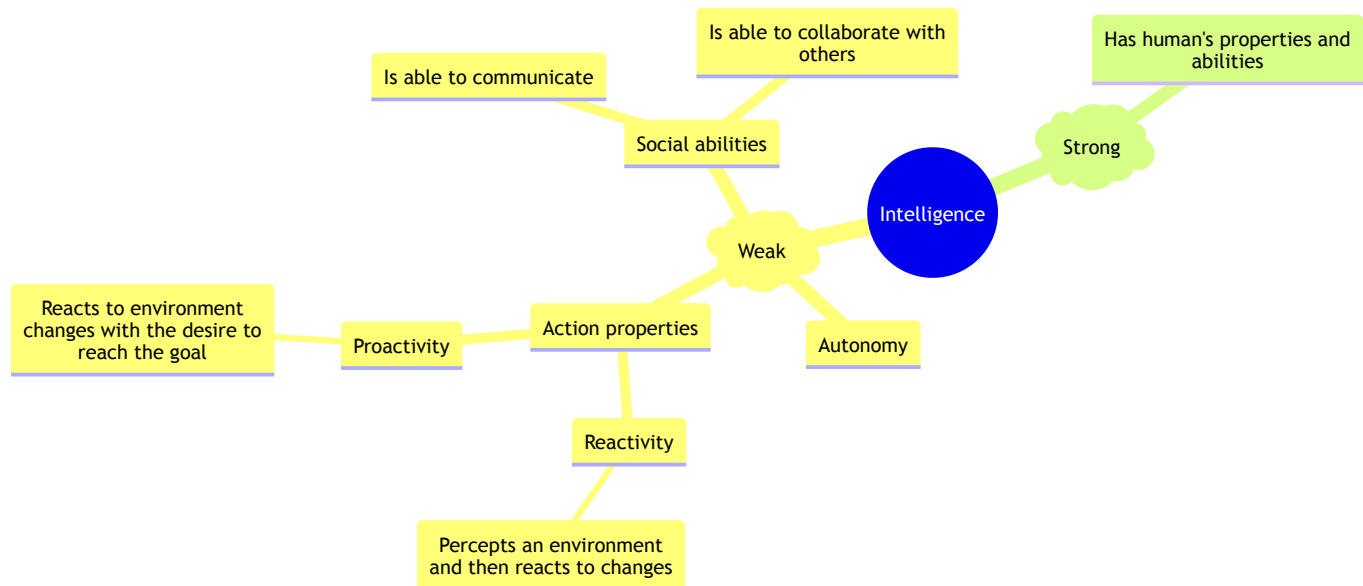
Figure 1: Agent as a function can be seen as a black box

Agent is a function that is a black box, i.e. we don't know how it produces its results. An agent receives information from sensors(S), processes them via function(f) and returns back an action(A) to do.

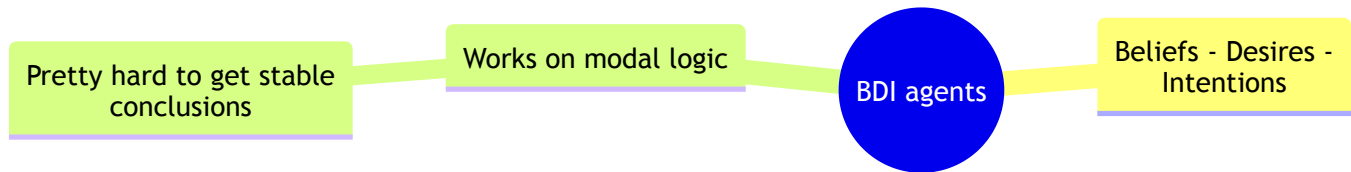
Intelligent agent types



Intelligence



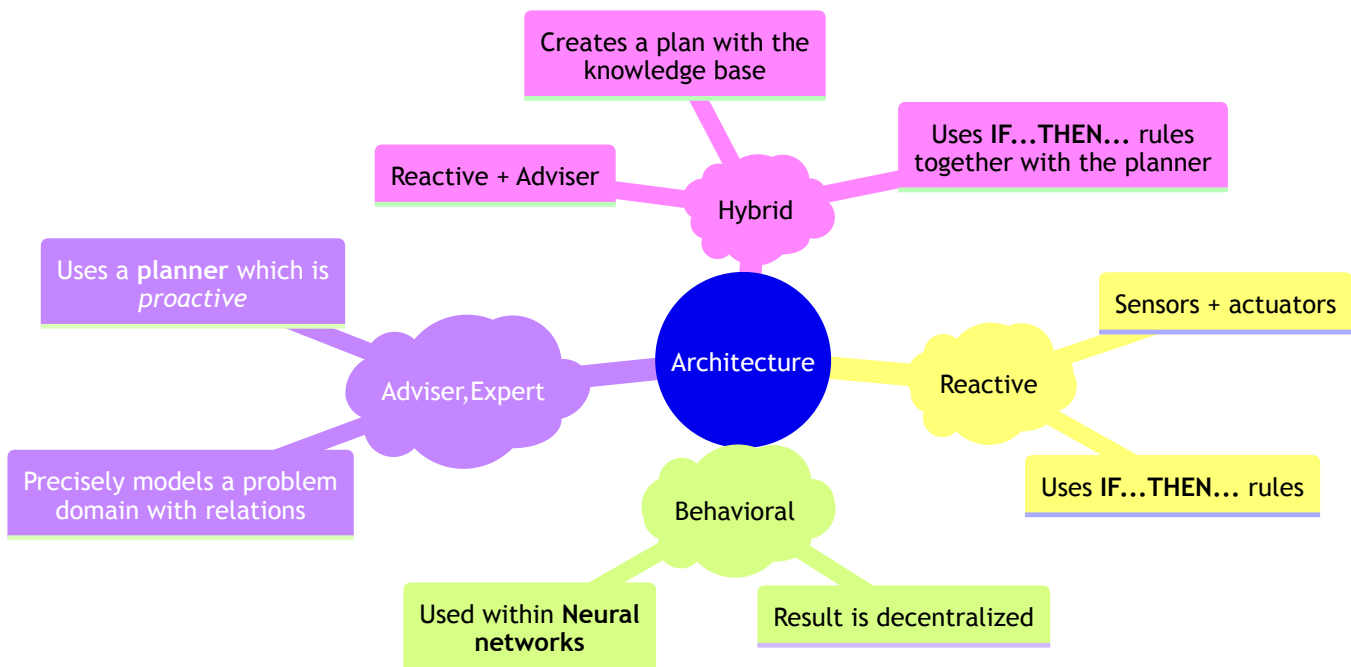
BDI agents



IA as a program

An agent can be described as a program:

$$agent = program + architecture(computing platform)$$



Architectural properties can be described with the abbreviations **PAGE** and **PEAS**.

PAGE - percept, actions, goals and environment.

PEAS - performance, environment, actuators and sensors.