# Unity ML-Agents Toolkit

Nuño Mugica, C. Mikel Berganza



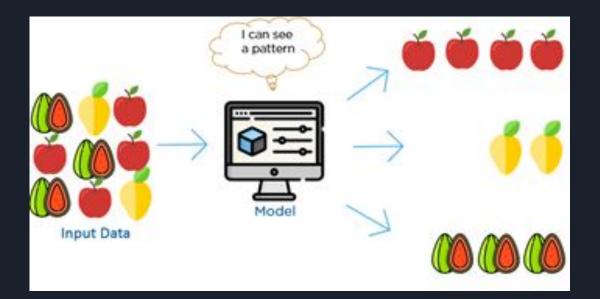
## MACHINE LEARNING

- Branch of Al
- Focuses on learning patterns from data.
- Multiple Learning (UL, SL, RL) and Training Methods

### Learning methods

**Unsupervised learning:** -Information that is neither classified nor labeled

-Allows the algorithm to act on that information without guidance

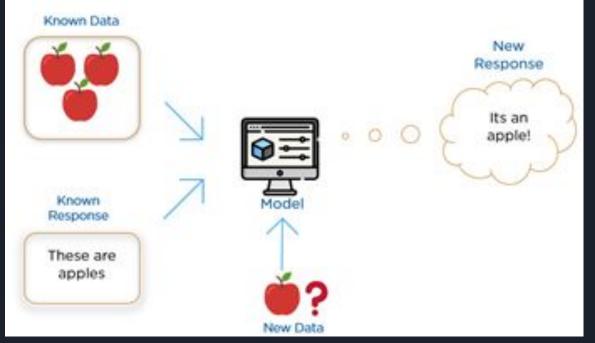




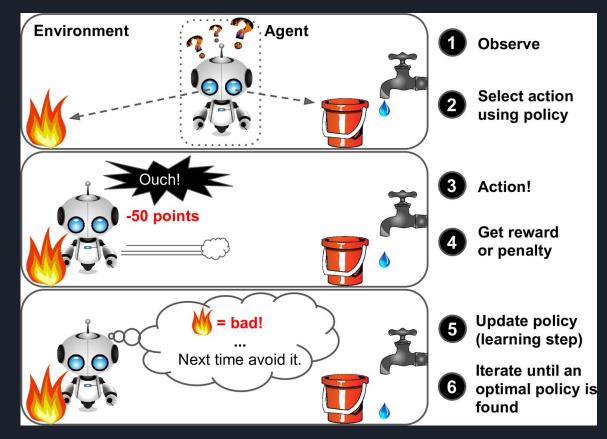
### Supervised learning:

-Both input and desired output data are provided.

#### -Input and output data are labelled



#### **Reinforcement learning:** Uses a system of reward and punishment.





### TENSORFLOW



- Open Source Software Library
- Performs computations using data flow graphs
- Flexible Architecture
- Originally developed by members of Google Brain and Google's AI organization
- Well supported by other companies



### APPLICATIONS

- <u>DRIVING</u>
- DRONE FLIGHT
- ENVIRONMENT SIMULATIONS
- <u>GENERAL AI TRAINING</u>



### CONCLUSIONS

Easy to pick up and start using
Robust open source base in current development