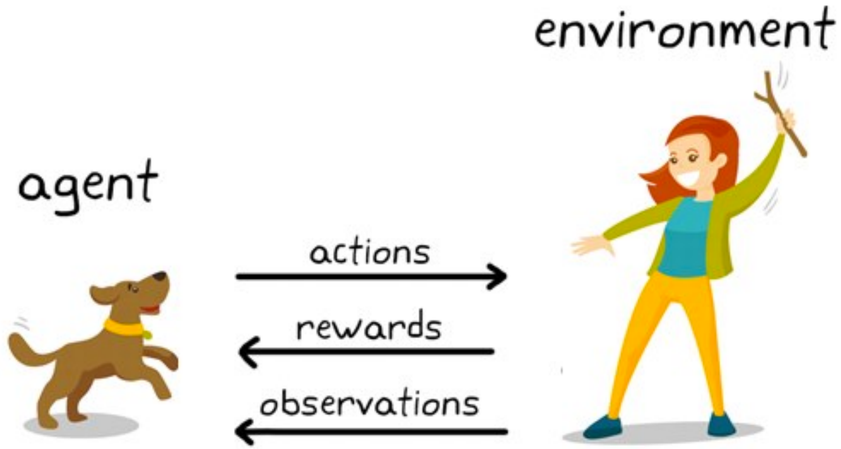
Reinforcement learning

- Training an agent to learn by interacting with its environment
- Agent learns by iterating through a cycle:
  - Observe environment
  - Take action
  - Receive reward
  - Update belief



https://www.kdnuggets.com/2019/10/mathworks-reinforcement-learning.html

How does a model “learn”?

- A model that “learns” from data can be viewed as an optimization process
- The “learning” occurs as the model optimizes its parameters to find a combination of parameters that produces a function that best fits the data
- “Best fit” is determined by a scoring criteria (ie. objective) that compares the model to the observed data, which is designed for a specific task
    - Example objective functions: Classification accuracy (supervised learning), distance to cluster centroid (unsupervised learning), reward function (reinforcement learning)