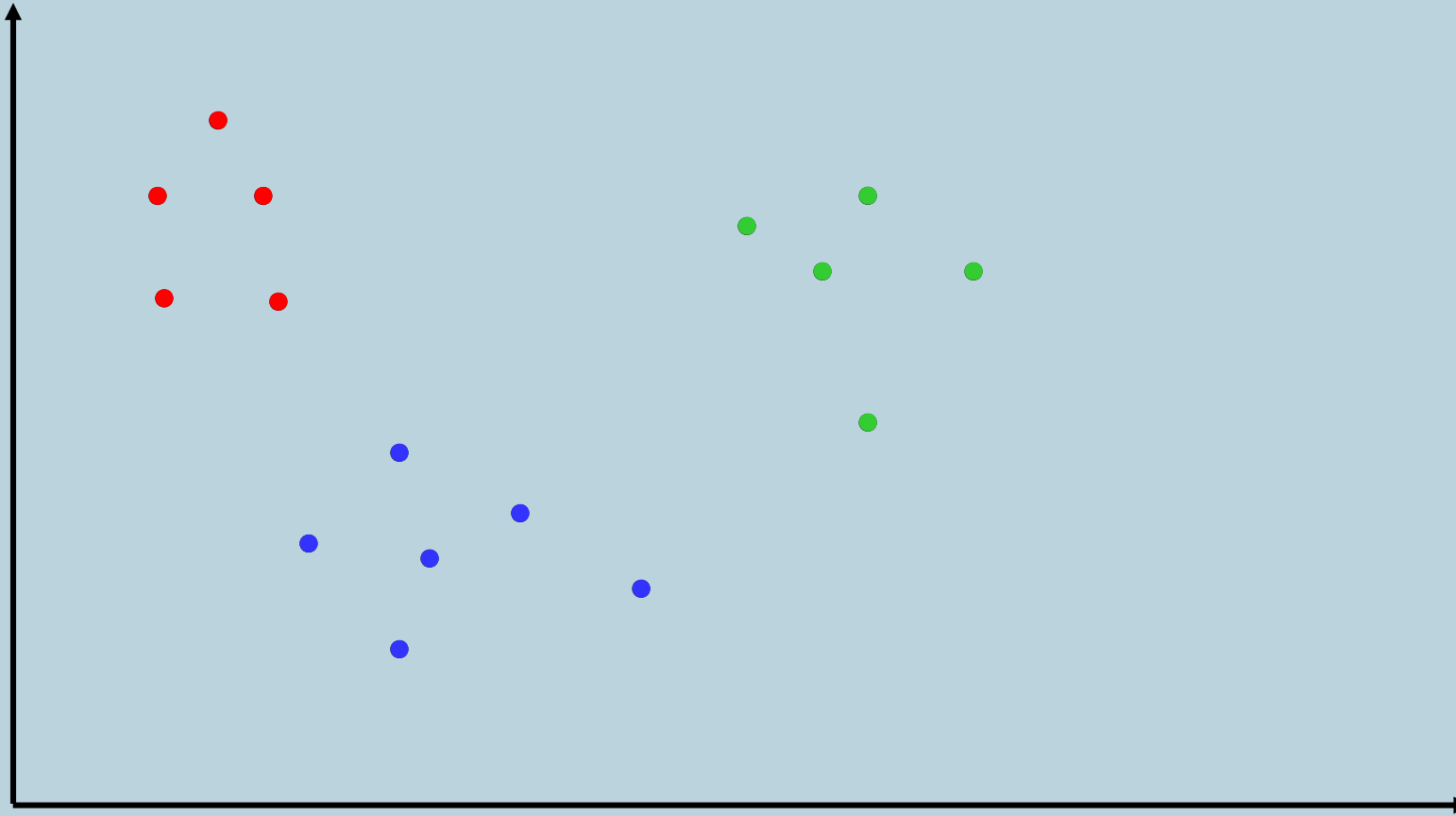

Alternative Types of Machine Learning that Vary Based on Level of Supervision

Unsupervised Learning

- Learning when the training data does not come with any category labels or desired output.
- Simplest case is “clustering” or grouping unlabeled training examples into coherent, distinct conceptual groups.

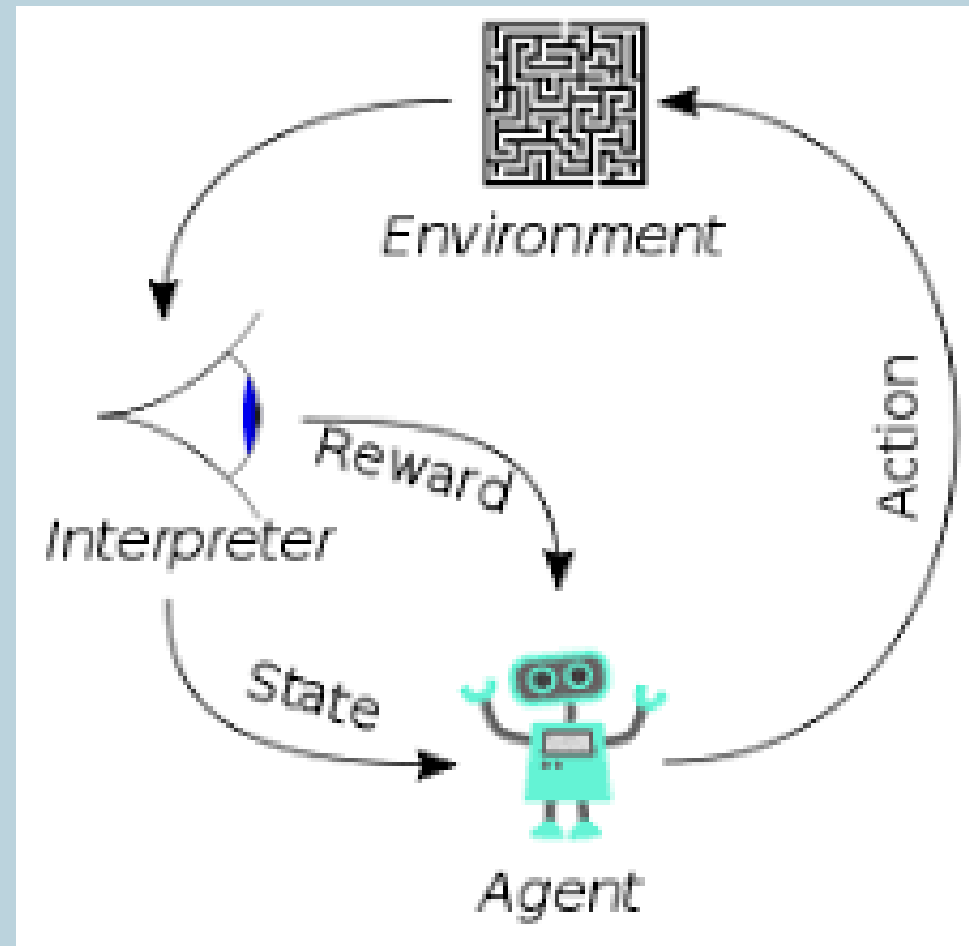
Clustering Example



Reinforcement Learning

- Learning to perform a task that requires performing a sequence of actions to accomplish a goal.
- The only supervision is “delayed reward” that is given only after multiple actions.
- Rewards/reinforcement can be positive or negative.
- Learn a “policy” that decides what action to take at each step to maximize long-term reward.

Reinforcement Learning Illustration



Reinforcement Learning Success Story

