



SNS COLLEGE OF TECHNOLOGY

Coimbatore - 35



23BAT613 – Artificial Intelligence for Managers

Unit II – Unboxing ML & Its Applications



Presented by

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Design Thinker

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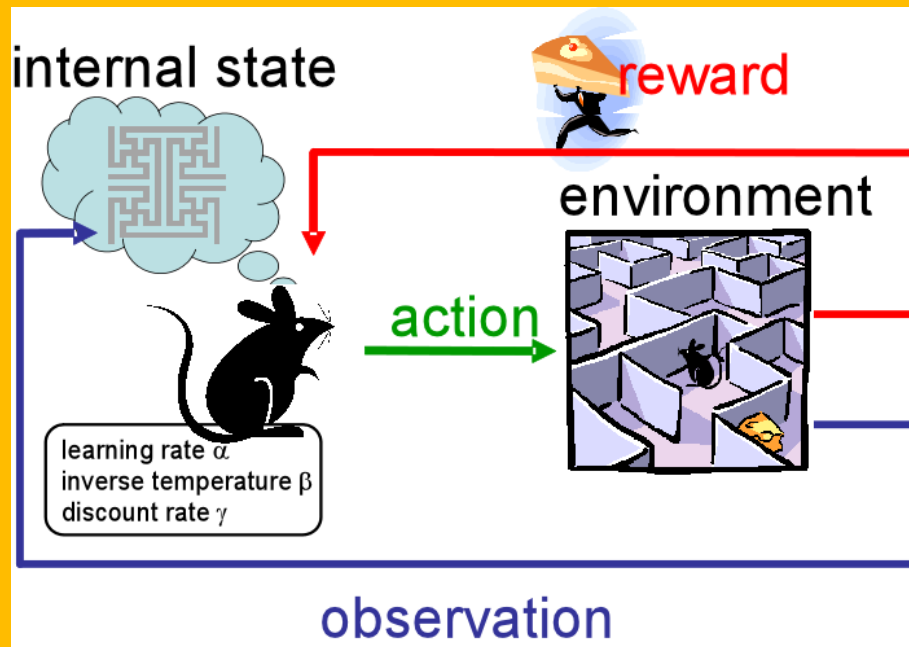
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Guess the Topic!!!

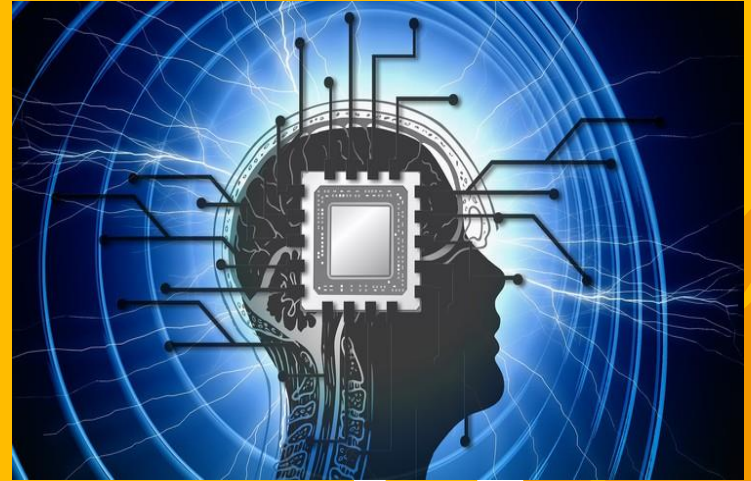
Reinforcement Learning





Recap

- Reason to study Recommendation System
- Recommendation System & type
- Collaborative vs Content based
- Architecture
- Example





Discussion about....

Reason to study Reinforcement Learning

- Reinforcement Learning
- Reinforcement Learning in ML
- Model-based and Model-free Reinforcement Learning
- Example for Reinforcement Learning





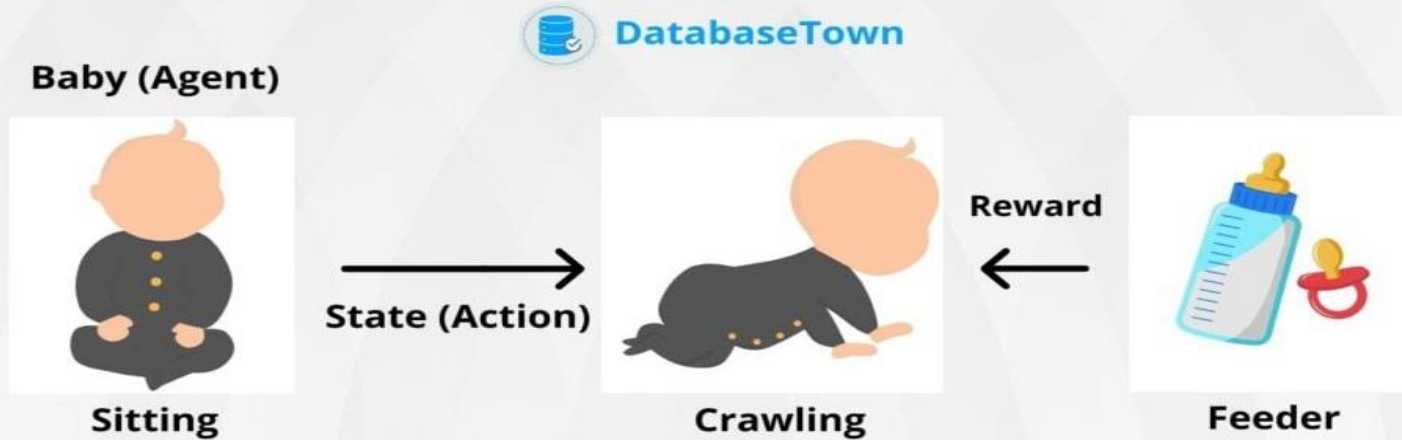
Reason to study Reinforcement Learning





Reinforcement Learning

Reinforcement learning is a machine learning paradigm that focuses on how agents learn to interact with an environment to maximize cumulative rewards.

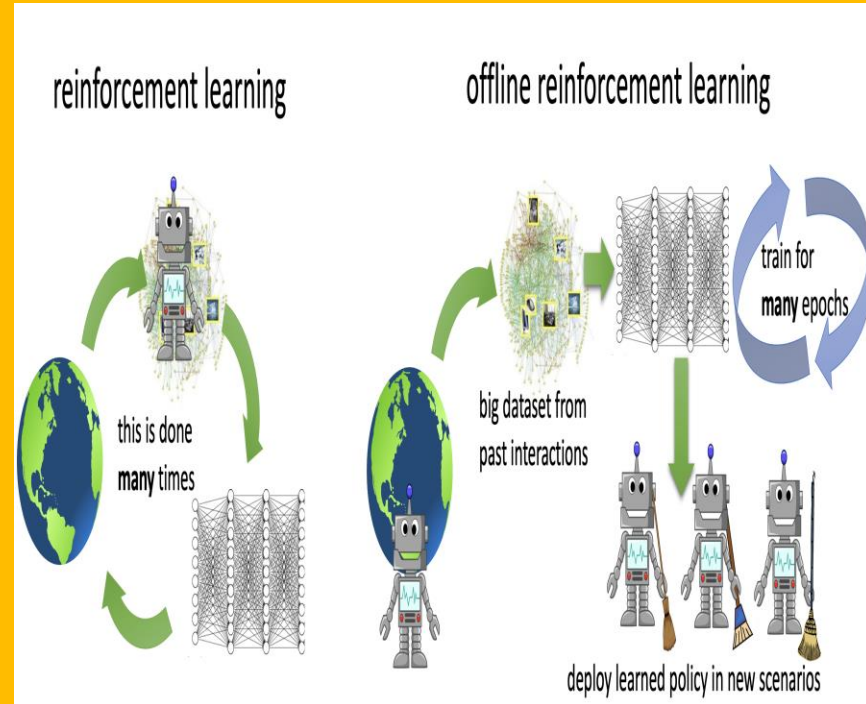
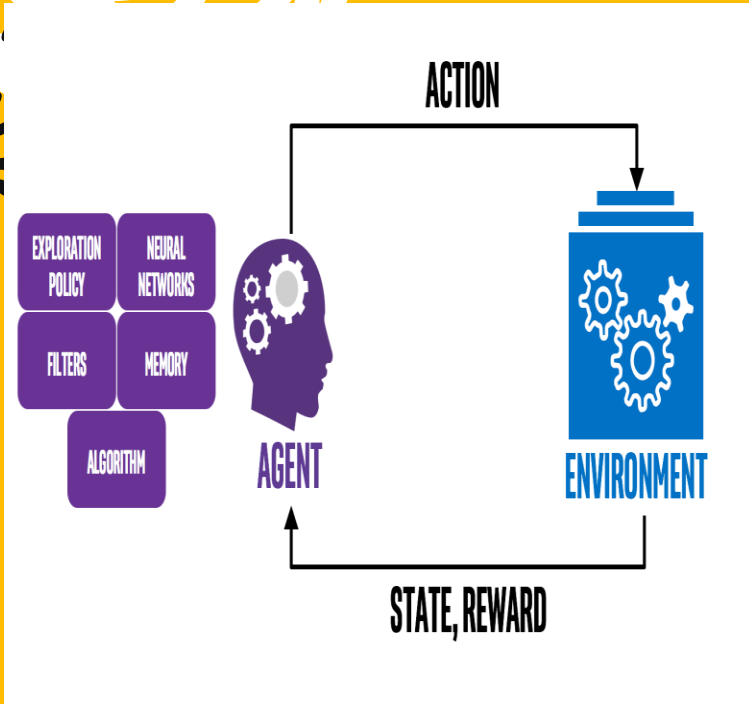


Algorithms and Approaches in Reinforcement Learning

- Q-learning
- Deep Q-networks (DQN)
- Policy Gradients Methods
- Proximal Policy Optimization (PPO)

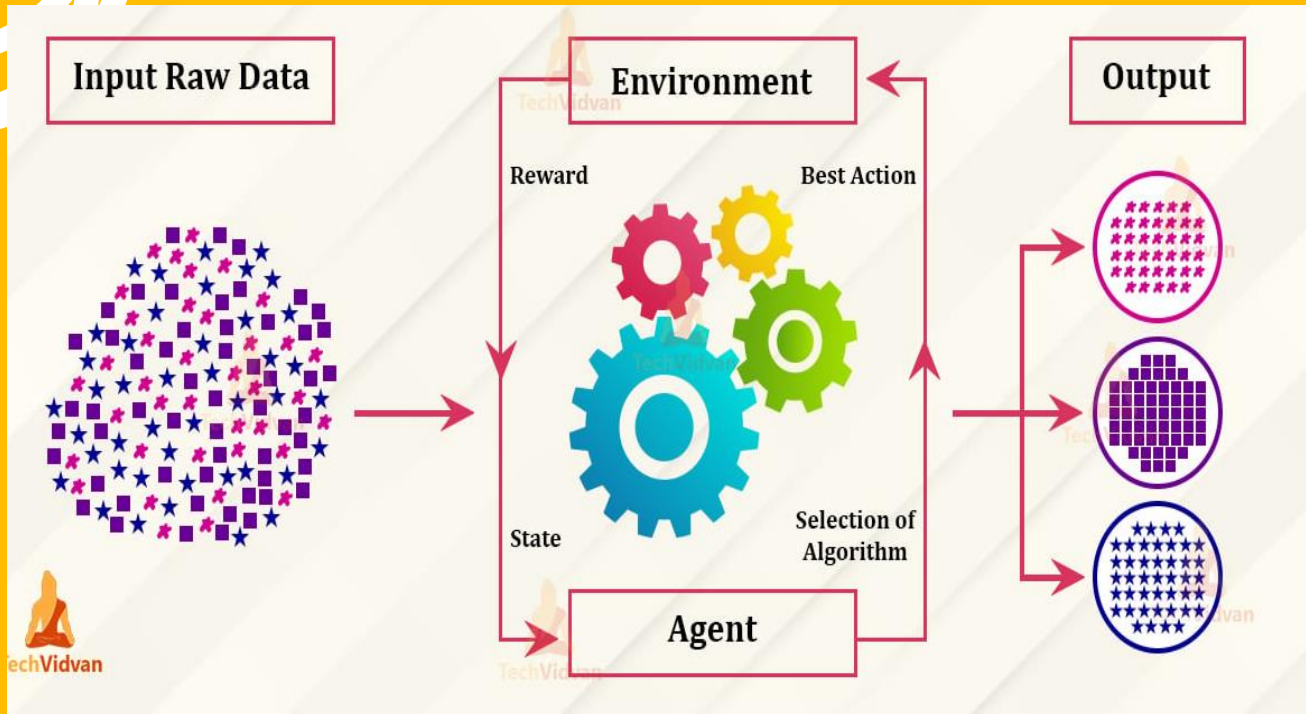


Reinforcement Learning



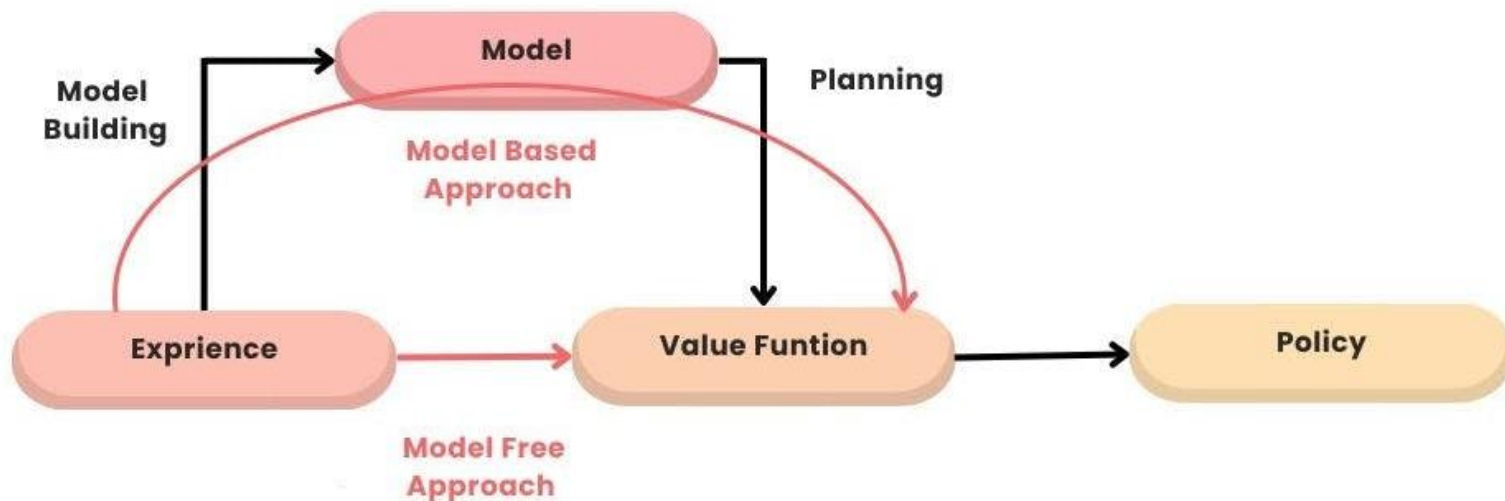


Reinforcement Learning in ML



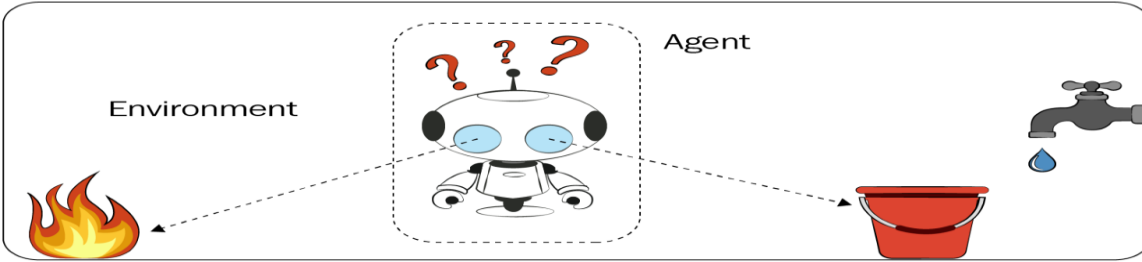


Model-based vs Model-free Reinforcement Learning





Example for Reinforcement Learning



1. Observe

2. Select action using policy



3. Action

4. Get reward or penalty



5. Update policy (learning step)

6. Iterate until an optimal policy is found



Knowledge Check

Which of the following is NOT a type of unsupervised learning?

- X A) Clustering
- X B) Dimensionality Reduction
- X C) Regression
- X D) Association Mining
- X **Answer: Regression**



Summary

- Reason to study unsupervised Learning
 - Unsupervised Learning - types
 - Unsupervised Learning -Clustering
 - Unsupervised Learning – Dimensionality Reduction
 - Unsupervised Learning – Association Rule
 - Supervised Learning vs Unsupervised Learning





References

- <https://stl.tech/blog/introduction-to-machine-learning-and-its-applications/>
- <https://www.geeksforgeeks.org/types-of-machine-learning/>





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Thanks!

