

Ex 1

1. What is the research problem?

The chosen article is [Reinforcement Learning with Trajectory Feedback](#) from AAAI21.

Based on the abstract the research problem is trying to estimate the reward of reinforcement learning based on a weaker form of feedback compared to having to estimate a reward for every single state-action pair.

2. Is the topic related to the topics of this course?

I think so. It's about a reward estimation method for reinforcement learning, which is an area of machine learning.

3. Generally speaking, what impression does the article give about modern AI research? Reflect on the history and philosophy of AI discussed above.

Without really any experience in reading research papers, to me it seems that the referenced papers are also very recent. To me it seems that most of the research happening on modern AI is fairly recent with only a couple of references being from before the year 2000. Philosophically this doesn't seem much like AI, and more about statistics or mathematics.

4. What studies would be needed to understand the article in detail?

I guess this course or some other intro to what modern AI actually is, and some further studies into reinforcement learning could be enough. The research seems to be highly related to some other studies so even that might not be enough, and it's likely that a lot of knowledge on what is currently going on with AI research would also be necessary.

5. Bonus question: Considering the article you chose, how relevant is the "Terminator" scenario where AI becomes self-conscious and turns against the humankind?

It seems unlikely. The research still seems very specific and not something that suddenly solves itself and goes out of control.

Ex2

1. BFS

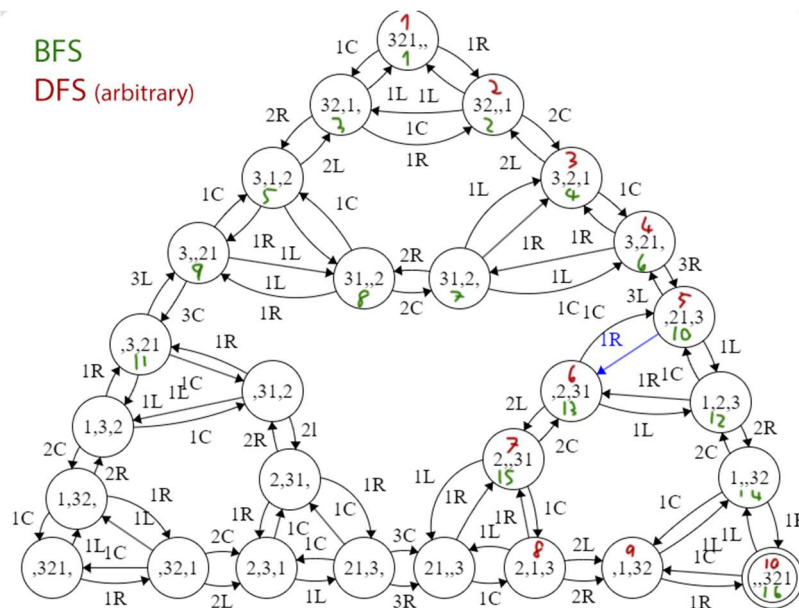
list	visited
A	
B	A
CF	AB
FEI	ABC
EIDG	ABCF
IDG	ABCFE
DG	ABCFEI
G	ABCFEID
	ABCFEIDG (goal, return node)

2. DFS

list	visited
A	
B	A
CF	AB
FDG	ABC
FD	ABCG (goal, return node)

Ex3

- 1-3.
- BFS
 - DFS (arbitrary)



4. In my example, DFS finds a longer path, but visits fewer states.

5. For BFS, the selection order does not affect the result, but with DFS the order can change the resulting path.