

Feedback provider name: Tamara Czinczoll
Feedback provider student number: 12858609
Feedback recipient name: Tom Lieberum

Instructions:

Take some time to read the other group's report or blog (about 30-45 minutes). After that, use this feedback form to note your comments.

For each criterium (row), make clear which of the options apply, by e.g. underlining it or marking it in color. For each section, explain in a couple of sentences why you have given the rating, and what the other group could do to improve on those aspects.

75 minutes after the start of the tutorial session (12:15 or 14:15), get back together in the breakout room to share your feedback. You might both take 5-10 minutes to read the feedback, and then ask each other for additional explanation if something is still unclear. In addition to sharing the feedback with the other person, upload a PDF version of this form in Canvas.

- Presentation. Clear, legible, structured, use design elements (e.g. media) effectively.

Clarity of writing needs to be improved	Clarity ok, but could be further improved	Excellent clarity of writing
Use of design elements (media / headings) needs to be improved	Ok use of design elements, but could be further improved	Excellent use of design elements

explanation / possibility for improvement:

- 1) Your structure in the beginning could be improved a bit more. For example, the explanation on what NPG and TRPO are should not be part of the introduction, but rather be explained in the related work (which might be better named 'Background' or similar).
- 2) Also, Figure 2 is a bit chaotic, it might be nicer to plot the mean and std like in Fig. 3. All figures' font sizes should be bigger.

- Motivation and research question. What is the central question and why is it important?

Motivation or research questions need to be improved	Motivation & research questions ok, but could be improved further	Excellent motivation and research questions
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explanation / possibility for improvement:

I really like your research question and it is clearly stated in the Introduction. It's interesting to not just compare the two methods based on their performance but also on their step sizes. Well done!

- Explanation of the algorithm and techniques used. Explained intuitively where possible.

Missing formal description (e.g. algorithm, equation, pseudocode)	Formal description ok but could be improved	Excellent formal description
Missing explanation/intuition	Explanation/intuition ok but could be improved	Excellent explanation / intuition.

explanation / possibility for improvement:

- 1) Unfortunately, your explanations of NPG and TRPO are hard to follow since you basically describe what the equations look like without showing them. This was the biggest flaw I noticed in your report: ADD FORMULAS!
- 2) Also, I think you are using neural networks, but it's never really mentioned anywhere explicitly. Are there any problems that come with neural networks like in the DQN? Then you should also explain how they can be overcome

- Experimental design. How and why were experiments set up?

No comparison at all, or major improvement needed	Comparison to baseline, relevancy of baseline or environment not sufficiently clear	Excellent comparison, clear why this environment and baseline was chosen
single training run on single environment	multiple runs and/or multiple environments	
unclear how hyperparameters are chosen and which are used	clear how hyperparameters are chosen and which are used	

explanation / possibility for improvement:

- 1) "baseline" is maybe not that fitting since you are comparing two methods, so I think the way you set that up is good. It's also clear why you chose those environments.
- 2) You're running your experiments with multiple seeds. That's great! Maybe 5 is not quite enough if you have a lot of variance, but since I don't know how long your training time is it might have to do.
- 3) Your other hyperparameters, (not KL-divergence and learning rate) are not mentioned at all.

- Results and conclusion. Are results clearly presented & conclusions warranted.

Graphs and tables unclear - e.g. no axis labels, or unclear what quantity is shown	Graphs and tables clearly labeled, clear how quantities are calculated
No spread of results shown, or unclear what is shown	Clear indication of reliability of results (including clear definition of what is shown)
Unclear experimental procedure (number of runs, which environments & baselines)	Clear how experiments were performed clear how hyperparameters are chosen and which are use
No conclusions, or not sufficiently supported	Conclusions are sufficiently supported. Strength of conclusions take limitation of experiments into account.

explanation / possibility for improvement:

- 1) Your graphs are clear and nice, just the font size could be bigger.
- 2) You're showing the spread and clearly say what you show, that's great!
- 3) Your experimental setup (at least what's there up until now) is well-explained (just mention your other hyperparameters)
- 4) Since the experiments are not done yet, this cannot really be judged at this stage

- Credit. Clear mention of use of resources (environment, algorithms) by others.

Credit is not given everywhere where due, or own contribution of group is unclear.	Own contribution is clear, and credit is given where due.
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explanation / possibility for improvement:

- 1) Mostly you give credit where due except for your two main methods that you compare. Please add who came up with this

- Group size

For groups of 5: project does not exceed expectations of 4-people groups	Clear additional effort compared to minimal requirements (e.g. more than 2 environments, more than 2 algorithms compared, above average amount of own implementation)
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explanation / possibility for improvement:
It's a group of 4.

- Other feedback (optional)

- 1) Please explain what epsilon is exactly in the related works section.
- 2) There you also say: "This result is compared to the entropy-regularized approach for NPG by (Cen et al., 2020), which outperforms this measure." But in what regard does it outperform it? In terms of performance or of iteration complexity?
- 3) Also, I can see from your TODOs what you still intend to do and can only say to not overdo it. If you include all of those things you'll probably never finish the report/only finish it with a LOT of work. Keep it simple 😊