02285 AI and MAS, F24
Guidelines for Videos

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For inspiration on the kind of style we're aiming for, you can have a look at the paper presentation videos from ICAPS 2020 (International Conference on Automated Planning and Scheduling):

https://www.youtube.com/c/ICAPSConference/videos

The relevant videos are those that are between 7 and 11 minutes long and present technical papers. Your video is of course going to be somewhat different since it is not a presentation of a novel research result, and you should expect your viewers to already be familiar with the problem you're solving. However, some of the videos might still serve as an inspiration for how to make a short video presentation with a slide show presenting technical content and technical achievements. You can also have a look at the other videos, but these are tutorials and invited talks. Other relevant conferences are e.g. AAAI and IJCAI, but unfortunately the videos from those conferences have not been made publicly available.

Intended audience You should assume that your audience are experts in the curriculum of the course and the qualifying prerequisites of the course, and are also familiar with the hospital domain, MAvis server, etc. Hence:

- Go straight to the meat of your contribution. No need to waste time saying "this is a project on solving a multiagent problem where a number of colored agents have to move a number of colored boxes into..." We know all that.

- If part of your solution relies on algorithms covered in the course or are a part of the expected prerequisites for attending the course, e.g. BFS or $A^\star$, then you shouldn't explain them, but simply assume them to be known. However, for the algorithms that *you* design, it is essential that you explain them in sufficient detail (see below). Similarly, if you make use of algorithms that are not covered by the course or any of its expected prerequisites, you need to briefly introduce them (and cite the relevant sources on the slides).

Focus of the presentation This is not supposed to be a presentation of a piece of software, it is supposed to be a presentation of the underlying algorithmic ideas and the experimental results. Implementation details are hence normally irrelevant.

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The exception could be when an exercise only asks you to implement something for which the pseudocode has already been provided. However, even in that case, keep your presentation at the algorithmic level as much as possible, and only include code snippets in rare cases when you think it is crucial for the understanding of what you did. Otherwise, pseudocode is normally strongly preferable to code snippets.

In general, the focus should be on your overall algorithmic ideas, solutions and (potentially) original contributions. To present an algorithm of your own design, you would normally have to provide pseudocode for the algorithm and to illustrate its workings on at least one concrete example (ideally with animations or other visual aids to make it easy to understand quickly).

Anything you implement should be tested and benchmarked. The importance of benchmarks is to get some insights into the strength and weaknesses of a particular version of an algorithm. In some cases, you are asked to do certain specific benchmark tests, in other cases, it is completely up to you. In any case, you should always highlight and discuss the test results that are most interesting and illustrate important points. For instance, it might be that some particular modification of an algorithm gives a huge benefit on most types of levels, but fares worse on a few specific types. Then it would be relevant to include benchmarks of the original vs the modified algorithm on both level types and discuss. The numbers in the benchmarks are not in themselves interesting, they are only interesting to the extent that they provide some insights into how particular algorithms work, or what their relative strengths and weaknesses are. So make sure to thoroughly discuss what we learn from those numbers. And make sure to be as technically and conceptually precise as possible when you do. You are always welcome to include benchmarks on additional levels, including levels of your own design, in case these can provide additional insights or highlight some important properties of your algorithms.

The video should provide a brief and clear overview of what you have done and achieved in the project. If there are parts of the project that you are particularly proud of or find particularly interesting, it is OK to spend more time on those. But make sure that everything the assignment asks for is covered to a sufficient extent in your video to provide documentation that you completed everything.

Style of the presentation Be precise and concise! This is not supposed to look like a popular Youtube video for a general audience who are not experts in AI. It is supposed to look more like a conference presentation (cf. the link to the ICAPS videos above) to peers in the area. So use all the relevant terms from the field and don't try to oversimplify with the risk of becoming less precise. However, of course your presentation should still be comprehensible and clear for the intended expert audience, so "not oversimplifying" doesn't mean "just say anything that sounds really complicated". Conciseness means that it is short, precise *and* clear. E.g. "goal decomposition" is a very clear technical term, and is better to use than saying "we split the overall problem into a list of subproblems".

You are highly recommended to include screenshots and videos from the MAvis

server running your implemented algorithms on different levels. You can probably use that to explain some of the algorithmic ideas underlying your solutions and the resulting behaviours. Animated graphics can also work really well, e.g. using overlays on a screenshot from MAvis to illustrate a heuristic or the computed paths/plans of agents.

Technicalities Normally, it is preferable to be able to see the speaker in the video, e.g. using picture in picture. However, it is not mandatory, it is up to you. There are many different ways to do it, and we'll leave it to you to be creative and do what you prefer and think will work best. Probably the simplest approach is to record a Zoom meeting where you present the slides via screen sharing. It is not optimal in terms of flexibility and quality of the final output, but it's certainly OK. The software Screencast-O-Matic includes a free recorder that can record part of your screen as well as a feed from your webcam as picture in picture. It is not perfect, but it was made for recording presentations, so it is a bit more flexible than Zoom. You can for instance switch between seeing the webcam feed in full screen and as picture in picture, and you can move the picture in picture while presenting. Quicktime is also an option: First choose "New Movie Recording" to get a window with your webcam feed, resize it to one of the corners, choose "Float on Top", then open your slides behind the webcam feed and finally choose "New Screen Recording" in Quicktime.

If you want even more flexibility, you can consider OBS Studio. You can of course also do more ambitious things like recording the webcam feed and screen separately and then combine them in post-processing using movie editing software. In any case, the more flexibility your want, the more complex the system and setup will also be, so e.g. Zoom is the most straightforward, whereas OBS + post-processing is the most complex. I guess it also depends on whether you like to play around with such things and would like to learn more about making movies.

Make sure the audio is of an acceptable quality. Do some experiments first with recording and transcoding videos with your preferred setup and check that the final sound quality is acceptable. It should be very easy to hear everything being said in the video. The quality of the video feed should of course also be acceptable. You are strongly recommended *not* to read up from a prepared manuscript. Generally, it is much harder to follow what is being said if it's read from a manuscript. It's much better to rehearse approximately what you want to say a couple of times in advance and then do the video afterwards without a detailed script (it's of course acceptable to have a few keywords on a cue card). Then you will be more free in your formulations and also it will be much easier for the hearer to understand what you say, because you are then forced to think about the meaning of what you say, which will make it easier for the hearer to decode the intended meaning. **It's strictly forbidden to speed up the playback speed of the video.**

Assessment In the overall assessment of your video, clarity will part of the assessment, so if something is of a too bad quality to be heard or seen, it will count negatively. But other than that, the raw quality of the video recording is not going to affect the

assessment. Similarly, for your slides, the assessment will not be based on whether you use one font or the other, or spend a very long time positioning things on the slides to make them very esthetically pleasing. However, using instructive figures or animations can make your message more clear and easy to understand, and will hence count positively. If in doubt, ask the teacher!