

CSE/AMCS 60973: Topological Data Analysis

Talk summary

This assignment is due on Sept 29, by 11:59pm.

This assignment is a bit different than our usual ones. I'd like you to choose a talk from the set of talks on the AARTN:<https://www.aatrtn.net/seminar> – ideally, something connected to your research or interests. My only rule is that it can't be a talk by me, since the point is to look at some other work!

1. First, watch the talk, and write a brief summary of it. No opinions here (yet) – just the details of what was covered. For example: which tool(s) from TDA were used and how? Are they developing mathematical frameworks, or algorithms, or analysis of other domains?
2. Next, give me your opinion of the talk. Why did you pick this topic? Was the talk itself compelling? Where there unclear or confusing parts? Does it connect to content we've seen in the course so far, or that you have seen in your own research? Do you see obvious holes in their reasoning, justification, or methodology? Does it open up a lot of new questions, or do you think it closes a line of research?
3. Finally, take a look at a paper on this topic by the speaker. You don't have to read every line of every proof or algorithm, but at least skim and get a sense of what is included and how they are doing the work. Note that some of these talks cover multiple papers, so just choose one – the most recent, the earliest, or even the one you think is most interesting! What content was present in the paper which was not in the talk, and vice versa? Did the talk help your understanding of the paper, or do you think the work could have been presented more clearly?

Your writeup should clearly state which talk you watched as well as the speaker, as well as which paper you read (and why). Aim to answer these questions in a page or two at most. It's fine if you only answer some of the specific questions above, as the most important part is to engage critically with a research topic in the field, and demonstrate your understanding or clearly identify which points confused you.