

Topic 6: Graphs and networks (Group 7)

Positive Feedback:	Room for Improvement:
<p>Group 7's video and summary were clear and succinct and very much to the point. The animation caught my attention, the demonstrations were good and the whole presentation was very informative. It definitely stimulated my interest in the applicability of matrix representation of graphs</p>	<p>This subject matter requires much more than can be covered in 6 minutes, but, perhaps Group 7 could have presented overview examples of the uses of the solutions to the solutions to the problems discussed. This might have made the presentation more engaging. It would have been good to spend 30 seconds or so talking about the included (but not mentioned in the video) isochrone.html file. The distance calculations around Townsville using matrices would have been interesting, and showed a practical applications of the theorems discussed. To fit this in the discussion about the theorem could have been shortened a little.</p>
<p>Group 7: I really like this project done by group 7. The one-page summary, Jupyter notebook, and video all clearly demonstrate the ideas of the assigned reading materials and they made the contents very easy to understand. I also like how they display the result with Julia, they used animation effect to effectively convey some complex ideas</p>	<p>They have done so well that I don't think they need to change anything inside the summary and Jupyter notebook. The only thing that would make the video better might be that having one narrator throughout the video, which could improve fluency and consistency.</p>
<p>The content in the video is very substantial, from the most basic definition of the application. They talked about the Incidence Matrix, Laplacians, Kirchhoff's, and Max Flow-Min Cut subsections, which are in the book. From different sections, the Julia code is given, and the image method is used to deepen the audience's understanding. A very intuitive and comprehensive explanation of the basics.</p>	<p>The overall content is very comprehensive, but in terms of video, the content is very much. So it is difficult to distinguish the focus, and the audience needs to have a pre-understanding of this topic before they can keep up. Besides, perhaps adding some realistic stories or examples to replace the meaning of image points and lines will help to make the audience more enjoyable and help to understand the content.</p>

<p>Feedback to group 7: For the summary, the summary is very concise and covers the most critical points of knowledge. At the same time, they have carried out the very appropriate analysis of the cases for different knowledge points. The context is very consistent, making it easier for readers to understand graph and Mathematical concepts applied in the network.</p> <p>For video, clear logic, full content, comments, summaries and images in Julia make the algorithm more natural to understand, and finally use dynamic representation to make it easy to understand the usefulness of this algorithm.</p>	<p>Feedback to group 7: They spoke too fast in video.</p>
<p>Group 7: Their summary is clear within 4 parts of this concepts and makes me understand the graph very simply.</p>	<p>Group 7: They explain this part very detailed but the video is limited in a short time so they speak a little bit fast at the last part of the video.</p>
<p>The group's Jupyter notebook has clear and adequate comments or explanation text that helps me to understand the code. And they use many examples and generate many plots in the video that gives me a intuitive view of the graphs and network. In addition, though I'm fresh with this topic, their summary is concise and easy to understand.</p>	<p>The 6 minutes video is too short to contain all of the contents, so the group might double the speed when edit the video. And the volume is a bit low that during some part I can't hear clear.</p>
<p>Group 7: For the summary, the group describe the definitions with some graphs and this makes it easier to understand the directed graph and incidence matrix. For the video, the group describe the definitions well with the demonstration of the code and the code is well organized.</p>	<p>Group 7: For the summary, the group did not describe very good in tricks of solving Kirchhoff's Current Law problems and the Max Flow-Min Cut problem. The group can put more details in describing those contents. For the video, the group speak too fast and it could be difficult to catch them. If they can speak slower, it would be nice.</p>
<p>Group 7: The summary is attractive, which follows the standard format. And it uses different clear parts to show the relations between graphs, networks and the matrix; Video is simple and clear, and explains the related topics step by step. I think this group did a good work.</p>	<p>Group 7: The content in this topic is changing from easy to hard. In this summary, there are too many explanation on the flows. I think the summary could reduce some words to show the information in a more simple and clear way; The video also have too many contents, which caused the speeches of authors very fast. I do not like the speed which makes me feel uncomfortable. I think decreasing some parts is better for audiences to listen and understand.</p>

<p>Group-7</p> <p>-----</p> <p>They provided a distinction between two different methods of representation of a directed graph. Demonstrating the application of graphs and networks using Kirchhoff's law was a good idea since everyone can relate to Kirchhoff's law studied in the school.</p>	<p>Group-7</p> <p>-----</p> <p>They could have provided a simple overview of Max-flow min-cut and it can be assisted with a practical illustration.</p>
<p>Group 7: Showing the transformation from graph to incidence matrix, and then from incidence matrix back to graph again was illustrative. I found the illustration for the max-flow / min-cut theorem was helpful. The presentation was clear and understandable.</p>	<p>Group 7: The sped up audio in some sections was off-putting. The notebook seems to contain notes-to-self in places that should have been removed.</p>
<p>For group 7, the the structure of the summary is very clear. The language is easy to understand. There are many graphs in the jupyter notebook, so the video is not boring.</p>	<p>For group 7, actually, I think the summary is outstanding. In the video, I think that they could add some explanation of code.</p>
<p>In group 7 About the video we can know there are three or four classmates speaking but they clip their video well. They focue on their word and reduce the introduction of the topic.</p>	<p>I think at the last part of the video, if the classmate could speak slowly, it would be better.</p>
<p>Group 7: They have explained the theory part very nicely and the code is also very well organised in the video. The drafted summary is very impressive and is constructed in very good way which insures the completeness of the topic and project.</p>	<p>Group 7: There can be little more elaboration regarding the Application of the topic that is Max Flow and Min cut in the video and summary.</p>
<p>Both of the video and summary are perfect. The animation in the video and the format of the summary are the best part I like. The clear logic helps us understand the topic.</p>	<p>For me, it really is a great project and I can't see any flaws.</p>
<p>Many good formula and code are in video. Summary fomat is beautiful It is easy for us to understand the code.</p>	<p>It is better that some code should be included in summary.</p>
<p>Positive Feedback:</p> <ul style="list-style-type: none"> - Video progresses logically from basic graph data structures to applications of graph theory. - Clear audio, visuals in the graph are also clear, and not too much content is crammed in. Things are explained clearly. - Summary is well presented and written professionally in LaTeX. 	<p>Suggestions:</p> <ul style="list-style-type: none"> - One section in the summary was confusing as Incidence Matrix was represented as A, and the Adjacency Matrix was represented as B. Not a big concern, just would be neater to perhaps make A = Adjacency matrix, and B = Incidence Matrix. - The degree matrix D is said to have a range from 1 to the number of nodes in the graph. However, would it not be possible to have 0 in the diagonal, if the graph is disconnected? I.e. 1 or more nodes in the graph have no edges. - The second part of the video regarding Flow in graphs might be better explained using weighted edges, which was missing from this section of the video.

<p>The clear representation of directed graph was helpful to understand the concept. The markdown graphs and images gave a clear visualization of how each algorithm works. Incidence matrix and its applications for graphs were shown which helped the course of the video. Kirchhoff's Current laws are very important concept in electrical engineering and this video explains it gracefully. Solving KCL using graph theory makes the problem statement so much easier to understand rather than to go into the voltage and current loops part.</p>	<p>It seems that the team has increased the speed of the video. Probable cause could be due to explaining so much content in a short duration. So, in my opinion, instead of concentrating on many applications, may be if the team could have focused on two main applications of graph theory (maybe KCL and the explanation of Laplacian matrix) the explanation wouldn't have to be rushed. Overall I like the video and the summary as it binds everything together neatly and I've learnt something new about the graph theory today.</p>
<p>The flow of information delivered is coherent and symmetric. Besides, the presentation is quite loud and clear making it easy to understand everything what is been delivered.</p>	<p>There are some instances where more explanation is required like, how does linear equation $Ax = y$ came into the picture, and what vector s is. Besides, a bit more explanation of max-min cut problem is required.</p>
<p>The one group that did this topic did a great job, very clear with good examples. Video was clear and concise. I feel like I understand the topic from their work</p>	<p>Only thing I could suggest is maybe adding a second diagram to the A4 summary by reducing the header size and names on the sheet to explain the source>sink flow and minimum cut.</p>
<p>G7: There is clear introduction about incidence Matrix, Graph Laplacian matrix and KCL in summary. There are good coding style and notes in video. That makes their explanation more clearly, especially the part of the Max Flow- Min cut theory.</p>	<p>G7: Since the limited words, the content of the Max Flow- Min cut may make the reader feel confused. Using more words to introduce the Max Flow- Min cut and fewer words to introduce KCL is much better.</p>
<p>The group describes the topic in an understandable and detail way, and I can quickly get the knowledge. And in the video, they put the relevant information in the notebook while they are playing their code, which helps me understand easily.</p>	<p>Some content on the topic can be explained briefly. The group introduces everything in detail, which makes it hard to finish the video in time. In the end, they seem to speed up the video, which makes me a little bit difficult to catch up with what they are talking about.</p>
<p>There is only one group chose the graph topic. Their figure is very clear and the application is impression.</p>	<p>It seems they accelerate the playing speed to meet the time requirement. My suggestion is that they do not have to spend a lot of time to explain the adjacent matrix and diagonal matrix which they do not use anymore.</p>
<p>Group7 did well in this topic. Their video is quite clear and audience is easy to figure out the issues in the video. Their PDF file is good too, easy to read and good typesetting, just like reading a paper.</p>	<p>Group7 video has too much informations and they speak too fast, it it hard for a student who don't know this before to catch up. Also the summary, maybe more case proofs better.</p>
<p>For video, I like his notebook, there are a lot of text descriptions, not just using the code. It allows me to clearly understand what he is saying and is very fluent in speaking. Almost contains the entire topic. And sometimes running code gives me a better understanding of how the code works.</p>	<p>The opinion is that the introduction in the video does not have the details given by summary. Notebook has no boldfaces. It makes it difficult for me to determine where definitions and formulas are.</p>

<p>Group 7: The presentation is clear and intuitive with help of a lot of pictures. The contents are well-organized with a logic flow. For example, they firstly gave a detailed explanation about how to represent graph by incidence matrix. Then inversely, they also visualised the graph from a given incidence matrix. For the summary paper, they broke the topics down into 4 parts along with specific examples to demonstrate the definition of different matrices and how to solve the problems like KCL, max flow-min cut. The content in the summary paper is easy to understand as the math problem has been explained by examples.</p>	<p>Group 7: For the presentation video, a suggestion can be decreasing the speed of presenting. Even though the time is limited, emphases can be selected to represent the subtopics. For the summary paper, the content is complete enough, so the suggestion is only for the format. It may be better to use bold to emphasize the key points or definition.</p>
<p>Group 7: Their summary is much like a small thesis. Showing each knowledge point in four parts is very clear. As for video, the speed of their sliding is good. So it is easy to understand what they said by matching the code and the content of speech.</p>	<p>Group 7: In their summary, I think they need to add some background or some introduction of Graphs and Networks. To be honest, at the beginning, just from their summary and video, I do not know what's this. As for the video, I think they use the technique to accelerate the speed of voice to limit the time, but it made they can not be listened clearly.</p>
<p>I think they did it really well both for the codes and the video. And cover every knowledge in the textbook. After watching their work, I got a better understanding of the graph.</p>	<p>Maybe their work cover too much things, so I found they maybe modify the speed of their video, and that make it a little bit hard to understand.</p>
<p>I like their clear structure of the whole process of dealing with graph data. And the nice GIF involves in the presentation which really provided the process of the flow.</p>	<p>However, I still think there are little stuffs that could be improved. Firstly, you can refine your presentation because for the last two parts, the speed become fast and I have to listen twice to get your idea. Secondly, some real applications of Graph and Networks could also be added in your video. But generally great.</p>
<p>Group 7: Nice presentation plan. Good and clear introduction of the whole topic</p>	<p>They seem to speed up the video to make it shorter, which is really weird for listeners.</p>
<p>Group 7: Summary is a detailed and in-depth introduction. Every step is very complete and logical, I can easy to understand Graphs and Networks. The sound is loud and clear, the focus can also be expressed.</p>	<p>Group 7: Sometimes it is too entangled in the process of counting, this is not necessary, it can be a little simple. Some examples in the abstract can be appropriately reduced, and the abstract is somewhat bloated.</p>