Name of Teacher	Wing Lup, Ben Leong
Module	CS2109S-Introduction to AI and Machine Learning (LECTURE)
Academic Year/Sem	2021/2022 - SEM 2
Department	COMPUTER SCIENCE
Faculty	SCHOOL OF COMPUTING

Raters	Student
Responded	42
Invited	66
Response Ratio	64%

Note:

Class Size = Invited; Response Size = Responded; Response Rate = Response Ratio

A. GUIDELINES FOR INTERPRETING THE REPORT

The teacher evaluation report is for developmental purposes and is meant to help identify strengths and areas for improvement. Please consider the following recommendations that will aid in interpreting the results:

1. Examine the report by taking note of patterns in order to consider how best to act on the feedback your students have taken the time to provide. Use the reflection section at the end to reflect upon how you might act on the feedback.

2. These evaluations stem from student perception and thus constitute one source of evidence among others as to the quality of your teaching. Any response to the feedback should be based on the most representative results rather than on outlying responses.

3. Upon getting a general sense as to what has gone well, and which areas may require attention and improvement, it is important to drill down to the related questions. These questions can help guide future action if feedback from students suggest areas for improvement.

4. Keep both the likert scale and written comments in mind while reading through the report. High scores (4+) suggest student consensus indicating a strength. On the other hand, low scores (2-) should be considered as an area that requires immediate developmental focus based on student feedback.

B. NOMINATION FOR TEACHING AWARDS

	Response Count
I would like to nominate Wing Lup, Ben Leong for teaching awards	4

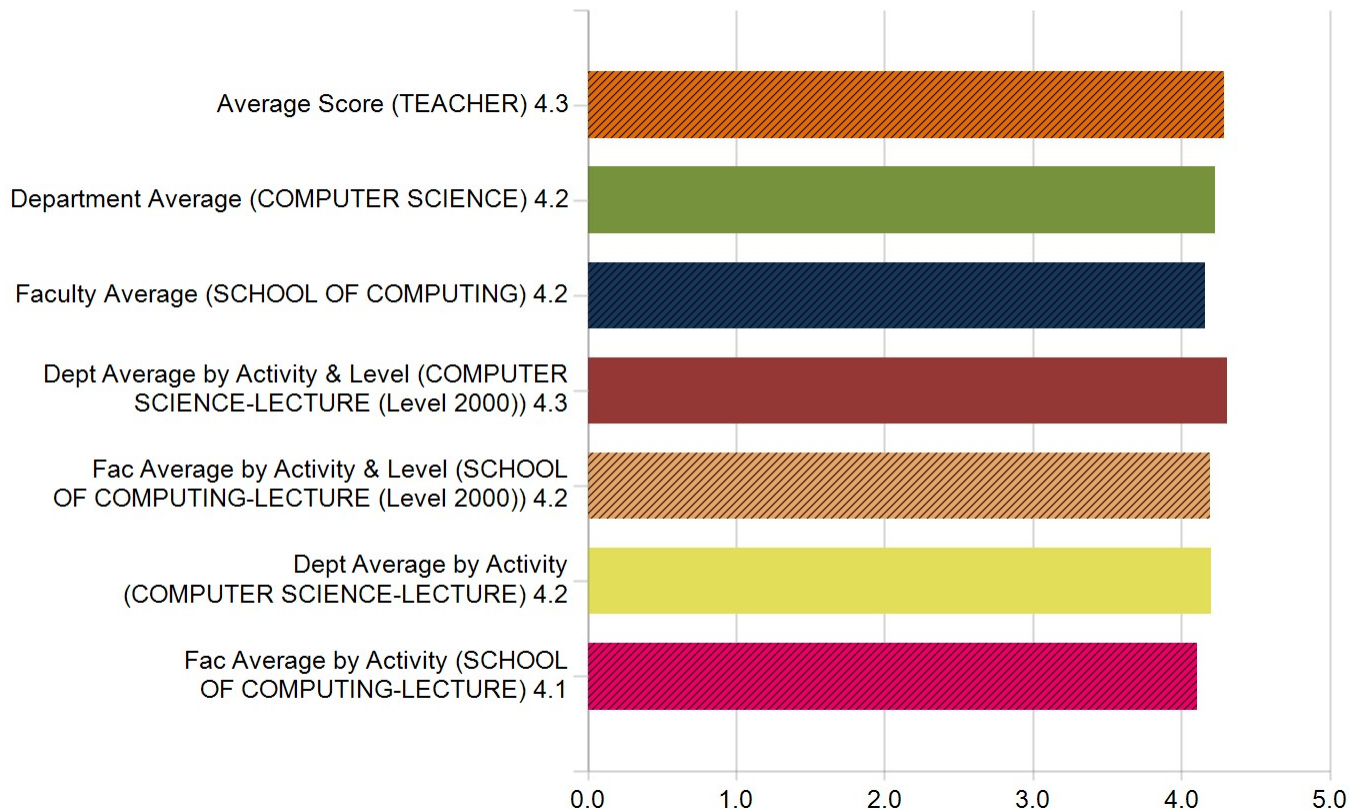| Comment |
|---|
| - Does his best to make the classes interesting! |
| - Explains complex topics very succinctly, able to keep the class's attention for 2 hours. |
| - One of the more refreshingly straightforward lecturers in NUS. His lectures are always a delight to attend. He covers the concepts clearly, and makes good attempts to engage with the students as well. |
| - One of the Best Professors in NUS who not only ensure holistic learning of the concepts but also imparts practical knowledge and coding experience. This helps bridge the gap between theory and practice not only helping students in internships and jobs but also instilling a deep knowledge of the concepts . |

C. STUDENT FEEDBACK SCORES

(i) Rating Score

Question	Average Score (TEACHER)		Department Average (COMPUTER SCIENCE)		Faculty Average (SCHOOL OF COMPUTING)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Overall, the teacher is effective.	4.3	0.9	4.2	0.8	4.2	0.9

Question	Average Score (TEACHER)	Dept Average by Activity & Level (COMPUTER SCIENCE-LECTURE (Level 2000))	Fac Average by Activity & Level (SCHOOL OF COMPUTING-LECTURE (Level 2000))	Dept Average by Activity (COMPUTER SCIENCE-LECTURE)	Fac Average by Activity (SCHOOL OF COMPUTING-LECTURE)
	Mean	Mean	Mean	Mean	Mean
Overall, the teacher is effective.	4.3	4.3	4.2	4.2	4.1

Overall, the teacher is effective

Category	Score
Average Score (TEACHER)	4.3
Department Average (COMPUTER SCIENCE)	4.2
Faculty Average (SCHOOL OF COMPUTING)	4.2
Dept Average by Activity & Level (COMPUTER SCIENCE-LECTURE (Level 2000))	4.3
Fac Average by Activity & Level (SCHOOL OF COMPUTING-LECTURE (Level 2000))	4.2
Dept Average by Activity (COMPUTER SCIENCE-LECTURE)	4.2
Fac Average by Activity (SCHOOL OF COMPUTING-LECTURE)	4.1

Question	Average Score (TEACHER)		Department Average (COMPUTER SCIENCE)		Faculty Average (SCHOOL OF COMPUTING)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
The teacher has enhanced my thinking ability.	4.4	0.8	4.2	0.8	4.2	0.8
The teacher provided timely and useful feedback.	4.3	0.8	4.2	0.8	4.2	0.9
The teacher has increased my interest in the subject.	4.2	1.0	4.2	0.9	4.1	0.9
Average of Q1-Q3	4.3	0.9	4.2	-	4.1	-

Question	Average Score (TEACHER)	Dept Average by Activity & Level (COMPUTER SCIENCE-LECTURE (Level 2000))	Fac Average by Activity & Level (SCHOOL OF COMPUTING-LECTURE (Level 2000))	Dept Average by Activity (COMPUTER SCIENCE-LECTURE)	Fac Average by Activity (SCHOOL OF COMPUTING-LECTURE)
	Mean	Mean	Mean	Mean	Mean
The teacher has enhanced my thinking ability.	4.4	4.3	4.2	4.2	4.1
The teacher provided timely and useful feedback.	4.3	4.3	4.2	4.2	4.1
The teacher has increased my interest in the subject.	4.2	4.3	4.2	4.1	4.1
Average of Q1-Q3	4.3	4.3	4.2	4.2	4.1

Department Specific Questions

Question	Average Score (TEACHER)		Department Average (COMPUTER SCIENCE)	
	Mean	Standard Deviation	Mean	Standard Deviation
The teacher engaged me in useful interactions that have enhanced my learning.	4.3	0.7	4.2	0.8

Question	Average Score (TEACHER)		Department Average (COMPUTER SCIENCE)	
	Mean	Standard Deviation	Mean	Standard Deviation
The teacher's attitude and approach encouraged me to think and work in a creative and independent way.	4.4	0.7	4.2	0.8

Question	Average Score (TEACHER)		Department Average (COMPUTER SCIENCE)	
	Mean	Standard Deviation	Mean	Standard Deviation
The teacher cares about student development and learning.	4.4	0.7	4.2	0.8

(ii) Distribution of Responses and Additional Statistics

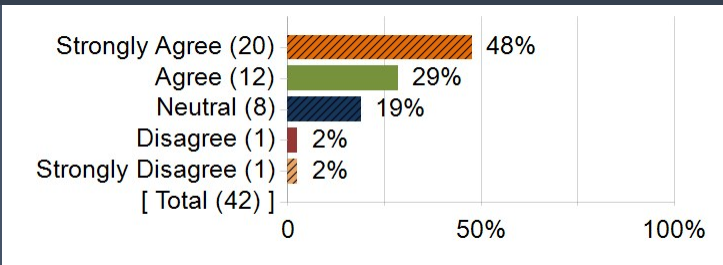### 1. The teacher has enhanced my thinking ability.
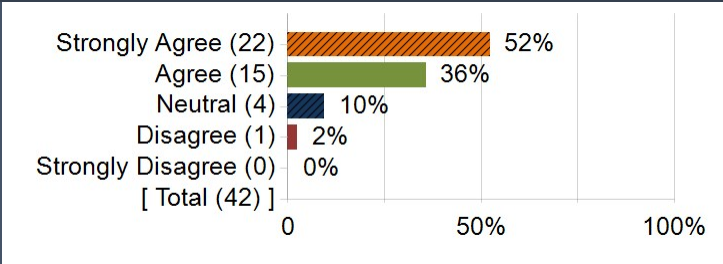
Strongly Agree (22) — 52%
Agree (15) — 36%
Neutral (4) — 10%
Disagree (1) — 2%
Strongly Disagree (0) — 0%
[Total (42)]

Statistics	Value
Response Count	42
Mean	4.4
Median	5.0
Mode	5
80th Percentile	5.0
Standard Deviation	0.8
Positive Feedback	88%

2. The teacher provided timely and useful feedback.
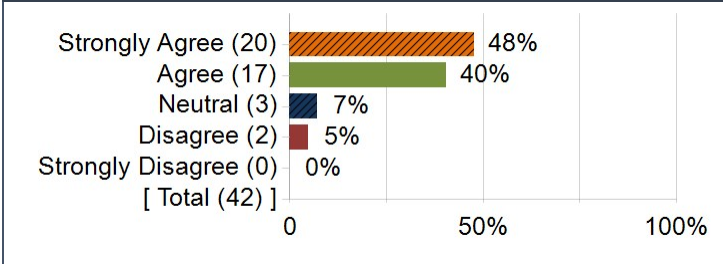
Strongly Agree (20) — 48%
Agree (17) — 40%
Neutral (3) — 7%
Disagree (2) — 5%
Strongly Disagree (0) — 0%
[Total (42)]

Statistics	Value
Response Count	42
Mean	4.3
Median	4.0
Mode	5
80th Percentile	5.0
Standard Deviation	0.8
Positive Feedback	88%

3. The teacher has increased my interest in the subject.

Strongly Agree (20) — 48%
Agree (12) — 29%
Neutral (8) — 19%
Disagree (1) — 2%
Strongly Disagree (1) — 2%
[Total (42)]

Statistics	Value
Response Count	42
Mean	4.2
Median	4.0
Mode	5
80th Percentile	5.0
Standard Deviation	1.0
Positive Feedback	76%

4. Overall, the teacher is effective.

Strongly Agree (22) — 52%
Agree (12) — 29%
Neutral (6) — 14%
Disagree (2) — 5%
Strongly Disagree (0) — 0%
[Total (42)]
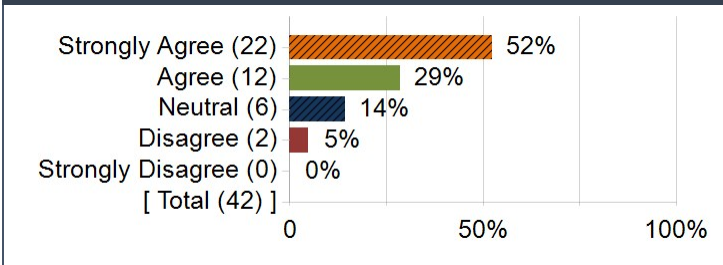
Statistics	Value
Response Count	42
Mean	4.3
Median	5.0
Mode	5
80th Percentile	5.0
Standard Deviation	0.9
Positive Feedback	81%

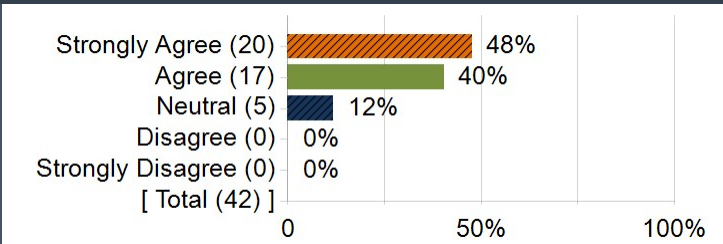**The teacher engaged me in useful interactions that have enhanced my learning.**

The teacher engaged me in useful interactions that have enhanced my learning.
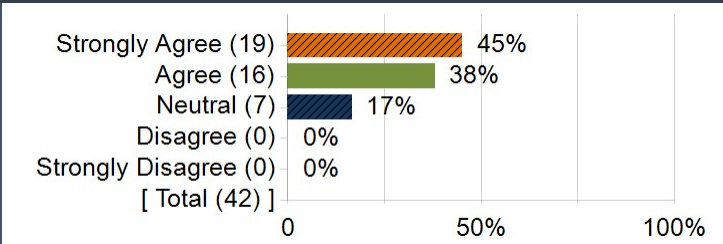
Strongly Agree (19)	45%
Agree (16)	38%
Neutral (7)	17%
Disagree (0)	0%
Strongly Disagree (0)	0%
[Total (42)]	

0   50%   100%

| Statistics	Value
Response Count	42
Mean	4.3
Median	4.0
Mode	5
80th Percentile	5.0
Standard Deviation	0.7
Positive Feedback	83%

The teacher's attitude and approach encouraged me to think and work in a creative and independent way.

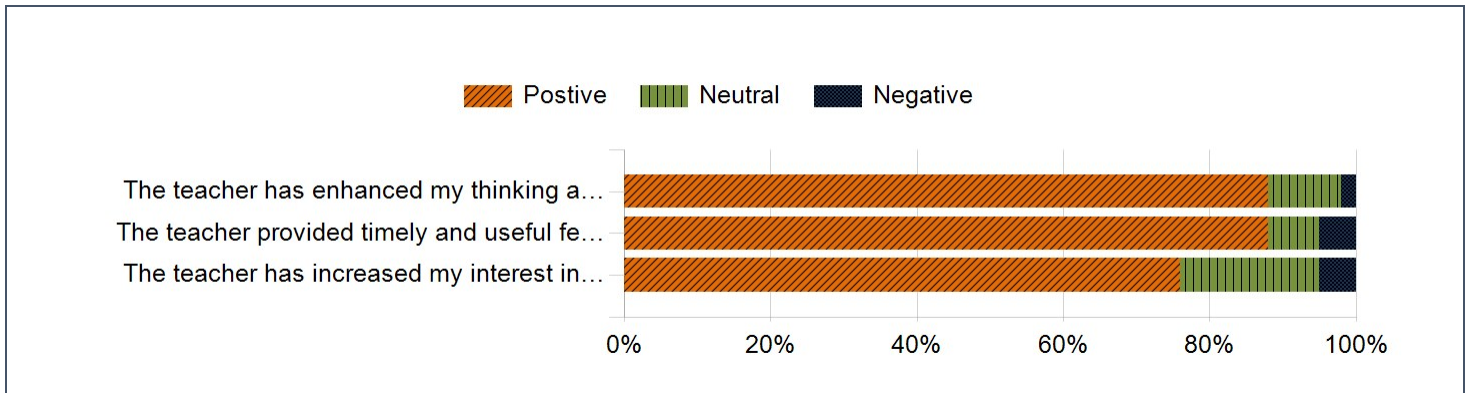The teacher's attitude and approach encouraged me to think and work in a creative and independent way.

Strongly Agree (20)	48%
Agree (17)	40%
Neutral (5)	12%
Disagree (0)	0%
Strongly Disagree (0)	0%
[Total (42)]	

0   50%   100%

Statistics	Value
Response Count	42
Mean	4.4
Median	4.0
Mode	5
80th Percentile	5.0
Standard Deviation	0.7
Positive Feedback	88%

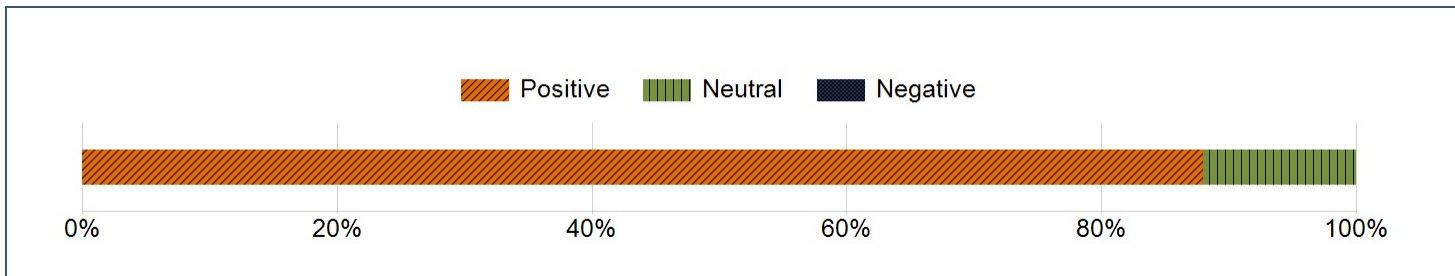**The teacher cares about student development and learning.**

The teacher cares about student development and learning.	
Strongly Agree (24)	57%
Agree (12)	29%
Neutral (6)	14%
Disagree (0)	0%
Strongly Disagree (0)	0%
[Total (42)]	

Statistics	Value
Response Count	42
Mean	4.4
Median	5.0
Mode	5
80th Percentile	5.0
Standard Deviation	0.7
Positive Feedback	86%
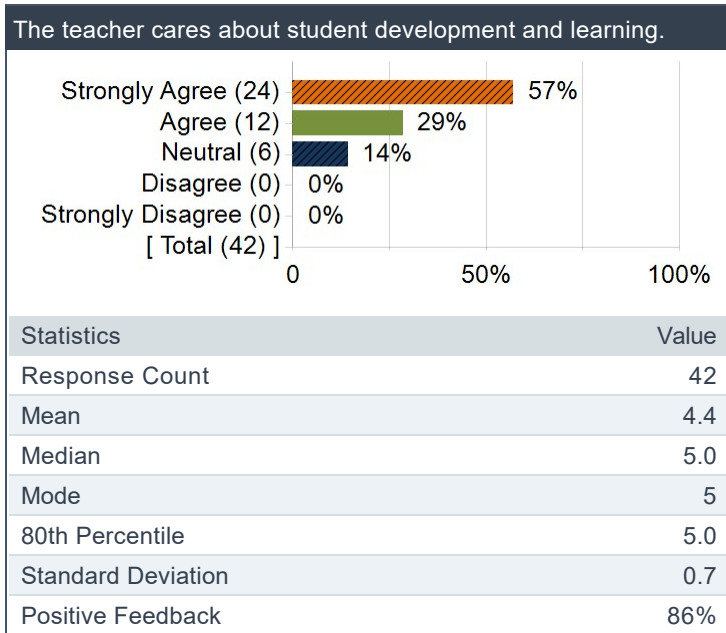
(iii) Scale Distribution of Responses

Legend: Postive, Neutral, Negative

- The teacher has enhanced my thinking a…
- The teacher provided timely and useful fe…
- The teacher has increased my interest in…

The teacher engaged me in useful interactions that have enhanced my learning.

Legend: Positive, Neutral, Negative

The teacher's attitude and approach encouraged me to think and work in a creative and independent way.

Positive Neutral Negative

0%   20%   40%   60%   80%   100%

The teacher cares about student development and learning.

Positive Neutral Negative

0%   20%   40%   60%   80%   100%

(iv) Rating Scores vs. Gender

Question	M	F	Overall
The teacher has enhanced my thinking ability.	4.4	4.3	4.4
The teacher provided timely and useful feedback.	4.3	4.3	4.3
The teacher has increased my interest in the subject.	4.2	4.1	4.2

D. STRENGTHS

What are Wing Lup, Ben Leong's strengths?

Comments
Prof Ben is an extremely experience lectuter and is able to deliver contents sufficently well given the amount of different content. He is very clear on his goals during lecture which is to introduce many new concepts and ideas and allow us to better understand these concepts in tutorials and problem sets. He would also reguarly check in on the class to ensure participation as well as making sure the class is on track.
He is a pragmatic person. Rather then diving into the deep of all the theory, he focusses on imparting to students the necessary and wider ideas that are of greater importance.
Good explanation of concepts
Does his best to make the classes interesting!
Explains complex topics very succinctly, able to keep the class's attention for 2 hours.
Good at explaining the objectives of the course.
Creates an interactive environment during lectures. Also very responsive in forums or private comments.
As this is a new module, he put in a lot of effort working with his team to create the slides, tutorials and problem sets and deliver them in time for our learning. He cares for his students, evident from his timely responses to students' queries and feedback. He tried to develop a benevolent relationship with his students, as well as encourage and motivate them.
Much effort was put into selecting the module content and including as wide of a scope as possible. I felt the breadth of the module was relatively large (given that this is only one module). The overall style of the module (more focus on higher level concepts in lecture rather than code) did push me to read into the topics further, e.g. other tree–based methods of decision making (MCTS, etc.), methods to improve performance (hashing, null–move heuristic, etc.), and quite some research done on neural networks (even if my understanding of them is comparatively superficial at best). Consideration was put into the 'demographics' of the cohort (mainly y2 cs this batch) – python isn't exactly covered for us (1101s is in JS, 2030s/2040s in Java) though learning it isn't hard, but it's good that we were 'bridged' and in particular there was focus on the scientific computing side of things (since numpy/scipy is ala Julia/R) which pure cs may not be exposed to that much. The AI problem sets being grounded in real world problems was a huge boon as it felt meaningful to do them. Know for a fact that the wordle one must have been rather rushed because it was capitalizing on a craze (which I did not get into, :P). The choice of the abstract strategy game for the project was also great (all pieces the same, two possible win cons, somewhat similar to chess) – I wonder what else could be next.
He focuses on teaching the concepts instead of just the theory of the subject.

E. AREAS FOR IMPROVEMENT

What improvements would you suggest to Wing Lup, Ben Leong?

Comments
For most part, lectures for AI generally well done. For Machine Learning, due to the various different formulas used, it would be useful to have clearer annotations and a summary page towards the end so that distinction can be slightly clearer.
Workload is too high
Have more tact when writing text by giving yourself more time to think, and putting yourself in other people's shoes. The same message can be written with more care, instead of writing so straight–forwardly. No one wants to be looked down upon. Be bold to admit to mistakes when it is made.
Brush up on content so that there will be less fumbling during lectures. Don't need to call on students so often.
Professor can be a bit more familiar with the topic taught
While I acknowledge that this module is new, his slides can be lacking in detail and difficult to follow. This is one thing that can be improved on for subsequent batches. He is a very intelligent man and most concepts are easy and intuitive for him. Hence, his teaching style is often fast and difficult to follow. Perhaps he can take the time to understand what students don't quite understand and address them.
(ps I know everything was super tight and rushed, but I try to be objective here) Personally I felt there was a rather large disparity in the intensity of the module between the AI part and the ML part. This was mainly felt in the coding /problem sets. Granted this is in part due to the introductory nature of this module, but in to complete the problem sets, I spent much more time on the AI ones. (I did invest more time into the ML ones overall, but that was done in a more exploratory ways outside of what was expected). Not sure what can be done here since a lot of these intro ML stuff is 'iconic' and rather ingrained (e.g. included datasets). The math part of the module (i.e. the dry part) needs a bit of tweaking. There was one lecture where quite some time was spent on a recap of basic lin alg which I felt was excessive (Impt! I don't know how CHS structures their curriculum). I'd expect almost everyone to have taken LinAlg 1 (MA1101R for current y2 batch and prior/ MA2001 moving onwards) before, and not to mention vectors (limited to in R^2 and R^3) is covered as part of A level math. On the other hand SVD is not in Lin Alg 1 (it also wasnt in Lin Alg 2 when i took it) but the explanation was good (granted I was a bit confused for the last problem set because I alr knew of svd so I had to 'backtrack' to follow the slide's implementation of getting the singular values). The end of the miniproject felt rather anti–climatic. Perhaps there could be some discussion on what methods were used by the winners in some like student–led discussion (though could be said that this is better left to off lecture for more informal discussion).
Quite a bit of content is simply brushed past, and feels rushed.

F. SELF-REFLECTION

1. When comparing these results to the previous year's results, what areas have shown improvement?

2. What areas remain to be improved and what are the necessary steps / actions to do so?

3. Are there colleagues who could potentially guide me?

4. Are there issues that require departmental or institutional support?