UNIVERSITY OF CAMBRIDGE
Department of Computer Science & Technology

Outreach Committee Meeting

13:30 - 15:00, Monday 10 November 2025
William Gates Building, Room GS15

Agenda

Committee Membership:
Jeremy Yallop (Chair, JDY)
Aga Niewiadomska, Outreach Administrator (Secretary, AN)
Celia Burns, Faculty Administrator (Notetaker, CB)
Laurie Gale (LPG)
Rachel Gardner, Communications Manager (RG)
Lise Gough, Postgraduate Education Manager (LMG)
Neel Krishnaswami (NK)
Peter Ochieng (PO)
Sue Sentence (SS)
Becky Straw, Undergraduate Teaching Manager (RS)
Jamie Vicary (JV)

1. **Apologies for Absence**

2. **Conflicts of interest**

3. **Updates on current outreach projects**

    a. **Women in CS**
    Programme evaluation report is attached.

    b. **DeepMind internships**

    c. **Sutton Trust summer school**
    Feedback summary is attached.

    d. **Physics at Work**

    e. **Cambridge Festival**

4. **Outreach feedback from External Advisory Board**

5. **Equality, Diversity and Inclusion (EDI)**
    All Department committees have been asked to include a standing item on equality, diversity and inclusion to ensure that these issues are considered across the Department. Do Committee members have any EDI issues they would like to raise?

6. **Any Other Business**

7. **Date of Next Meeting**

Women in Computer Science Programme 2025 Evaluation Report
In order to evaluate the effectiveness of the programme, students were asked to complete surveys before the programme began, before the residential and after the residential. They were asked questions about their knowledge of higher education (HE), Computer Science at university, their sense of belonging and top two subject choices.

The students' data was also added to the Higher Education Access Tracker (HEAT) meaning that we will be able to see whether they apply to Cambridge. However, we will not be able to see which students applied until Lent 2026. At the end of this report, there is a discussion of the number of applications to Cambridge from students participating in the 2024 programme.

To allow comparison with last year's programme, the questions asked have remained the same (see here to read last year's report which includes a discussion of how these questions were chosen). The full survey response data can be found in the appendix.

The response rate for the surveys was significantly better this year, with a 100% response rate for the first and second surveys, and dropping to 80% for the final survey. This means that we can much more confidently identify trends in the data.

How is this year's programme different from last year's?
The first run of the programme last year provided valuable insights. One of the key challenges was the unexpectedly high number of participants who dropped out. Inspired by STEM SMART, we decided to address this by selecting students (at least partially) based on their engagement. In order to do this, discussion groups were removed from the programme and instead the Women in Computer Science seminar series was created.

This series of five weekly webinars, delivered by the Outreach Coordinator and a female student from the Department, was open to all prospective students. Designed with interaction in mind, the seminars included polls to get the participants thinking, as well as a dedicated Q+A section at the end of the talk.

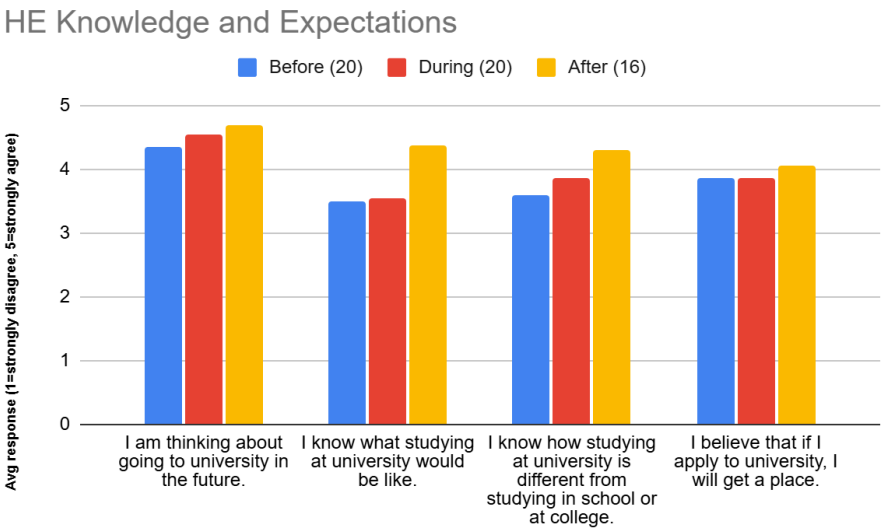
Last year, students were selected solely based on their background and circumstances (widening participation criteria e.g. whether their parents attended university, whether they are eligible for free school meals, the relative deprivation of the area they live, etc.). Whereas, this year, students were selected based on the same widening participation criteria, as well as their engagement with the seminar series. Only students who attended at least half of the seminars were considered, and most of the selected students attended all five.

Due to these changes, the first survey took place once the seminar series had concluded. Therefore the data from the first survey is not a true baseline, since it's likely that the seminar series itself had an impact on the students.

Subject choices
The student's subject choices did not vary much, with at least 85% of students choosing Computer Science (or a closely related subject) as their first choice in each survey. Though, it is worth noting that this is a bit higher than the number of students selecting CS as their first choice last year (65%, 62%, 57% in each respective survey). This may be a reflection of the changes in student selection - it's likely that students who are more certain about applying to Computer Science would engage more with the seminar series.

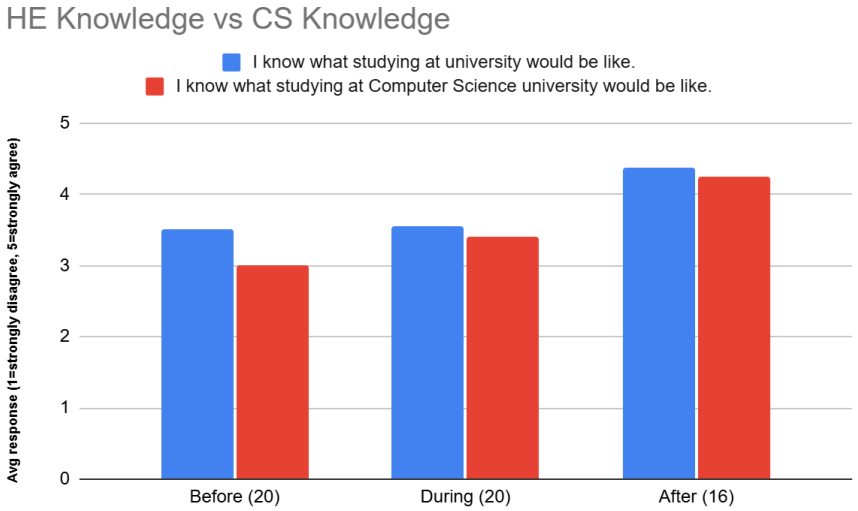
HE expectations, Knowledge of HE

As you can see from the graph below, the participants' HE knowledge and expectations were fairly similar before the programme began and before the residential (with only a very slight increase for the first and third question). However, it is clear that attending the residential increased students' confidence in understanding university life and to a smaller degree, how it differs from school.



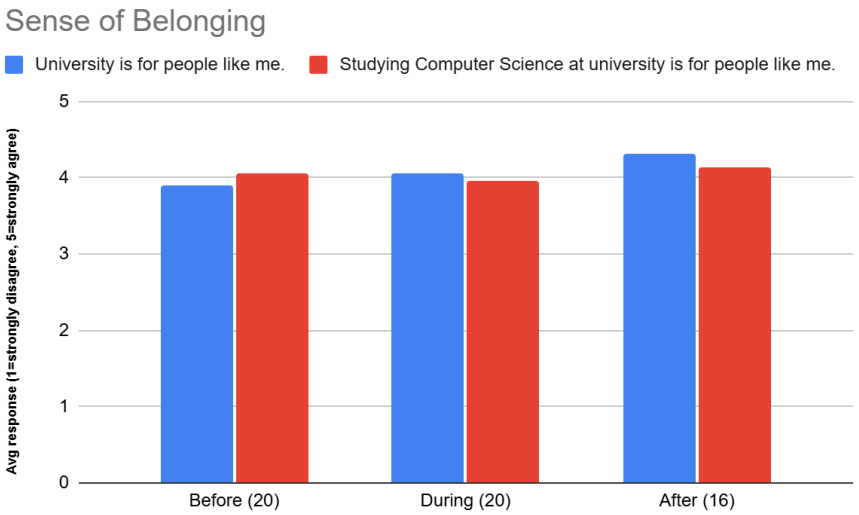
Knowledge of HE vs Knowledge of CS

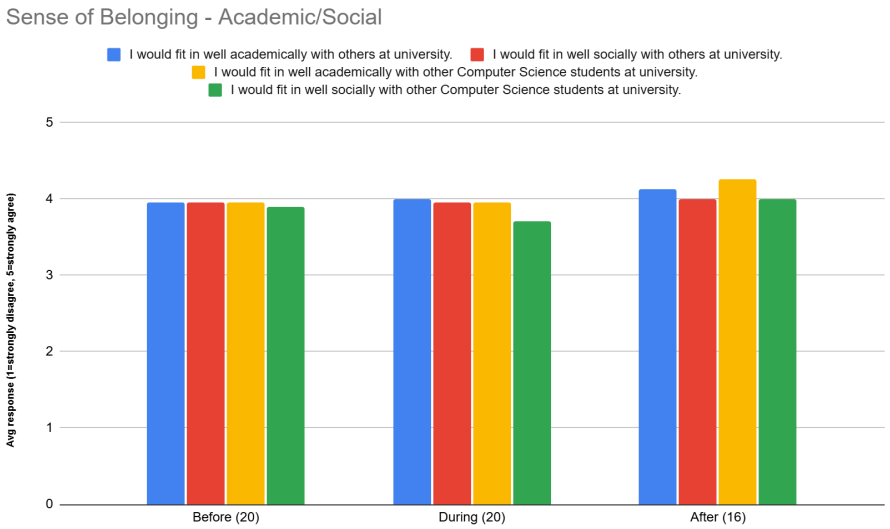
Like last year, it seems that the participants' knowledge of what studying at university would be like and what studying CS at university would be like improved over the course of the programme. The students started with a greater knowledge of HE more generally, but the final survey results show that their general HE knowledge and CS specific knowledge balanced out by the end of the programme.



Sense of belonging

There was very little change in the sense of belonging between the three surveys, which is quite different to last year's results. This may be due to the fact that the initial survey took place after the seminar series, and an improved sense of belonging is one of the main goals of the seminars.

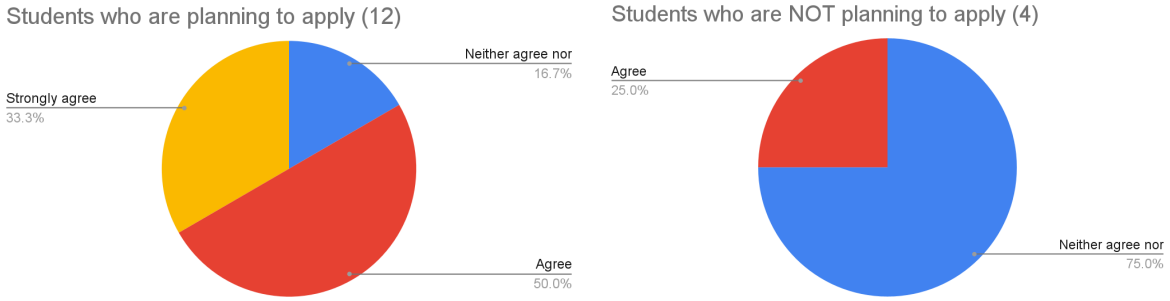




Impact on university choice

In the final survey, students were additionally asked whether they were planning to apply to Cambridge, 75% of the participants said yes. Below you can see the students' responses when asked whether the programme has influenced their decision. These show that the programme generally had a positive influence.

Being part of the programme has influenced my decision to apply to Cambridge



Strengths of the programme
In the final two surveys, students were asked which aspect of the programme they found most beneficial. The table below shows the results.

Most beneficial aspect:	Independent research project	Mentoring	Seminar series	Residential
Before residential	50% (10)	35% (7)	15% (3)	NA
After residential	23% (3)	8% (1)	8% (1)	62% (8)

The parts of the programme which are consistently most popular are the independent research project and residential, though each aspect was identified as most beneficial by at least one participant.

Below are select comments given by participants about each aspect of the programme:

- Independent research project
    - “By using the opportunity to delve deeper into a topic that I've been meaning to look at, and then do it at an academic level, researching it, referencing it, I obtained more than just a greater understanding as I applied it practically through a demo too to support my argument. ”
    - “It allowed me to really apply my passion for computer science into something i could present, almost like a portfolio for my knowledge. It also helped me evaluate my analytical skills when it came to evaluating sources and coming to my own conclusions.”
    - “I found it fun to research a topic of my choice in detail similar to how it would be as a university student.”
- Mentoring
    - “Through my mentoring process my mentor gave me great insights to university life and what i can do during sixth form to make my journey to university easier”
    - “Talking to my mentor helped me to build confidence and i feel much more prepared for an interview if i get one.”
    - “Through my mentoring process my mentor gave me great insights to university life and what i can do during sixth form to make my journey to university easier.”
- Seminar series
    - “I really enjoyed being able to explore a wide range of topics within computer science that I hadn’t come across before whilst studying A-level computer science, in particular ones related to AI. Through this seminar series I‘ve been able to develop new interests as well.”
- Residential
    - “The immersive experience helped me to understand what studying at cambridge could be like.”
    - “I could experience how uni life is and I have decided to apply to robinson college instead of making an open application.”
    - “I really enjoyed visiting Cambridge and meeting students and alumni and speaking to them in person.”

Residential activities
The residential took place at Robinson college this year and while the timetable was similar, there were a few changes, such as the introduction of an alumni panel, which many (6/14) students mentioned was the most useful part of the residential, saying:

- “The alumni talk was really inspiring and made me more excited for a career in computer science”
- “Receiving insight from professionals and alumni was extremely helpful and having the chance to ask my own questions was nice too.”
- “Helped me to understand what life could be like after university and the opportunities open for me”
- “I learnt about the different pathways that studying computer science can lead to and what former students have done after studying computer science and what it’s like to study computer science especially as a girl.”
- “it was very interesting to learn all the different paths they have taken and how they excelled despite being minorities in such a vast career”

The programming workshop was also changed from Prolog to being based on the Part IA MLRD course, which ended up working much better. First of all, the student ambassadors were all already familiar with the activity making it easier for them to help students. Secondly, one of the seminars has already covered the topic we were looking at (sentiment detection), so I only need to give a very short “reminder” presentation at the start of the session. Finally, students were really excited to hear that the practical was actually a part of the Cambridge course, with many (7 out of 14) stating this was the part of the residential that they enjoyed most, leaving the following comments:

- “It really tested my abilities and it was fun collaborating and working on the same problem. Then, to find out it was a Year 1 project, it was insightful!”
- “It gave me a chance to develop my coding skills with a new project in a completely different environment. I felt well supported throughout and it was an enjoyable experience”
- “I like problem solving especially with people who have the same interests as me as they think Similar to me”
- “I got to understand better how lexicons work after attending the webinar about it”
- “Categorising the reviews and discussing the limitations of sentimental programming was quite interesting for me.”
- “I learnt more about coding in Python and it was very enjoyable and Aga and the student ambassadors explained anything that I was stuck on.”

Several (4/14) students also mentioned really enjoying the punting.

The location of Robinson College was also much more convenient than that of Corpus Christi (who we partnered with last year), since we could walk to the Department very easily.

Learning points
The most common constructive feedback was that students wanted more guidance on the independent research project (e.g. how to structure it, how to reference correctly). Participants suggested showing examples of past projects as well as holding a dedicated online session just about the project.

The mentoring experience varied from student to student, it was clear that some mentors were much more engaged than others. When asked what we could do to improve the programme, one student responded with: “Possibly allow the mentor to be more active, I honestly did not have a good experience with my mentor due to not responding to me after weeks.” This was certainly an issue that I noticed too, as I often had to email mentors (and mentees) to remind them to look at ChatPro.

Finally, it was clear that during the residential the students who had not chosen Further Maths A-level were very disappointed to hear that it is a requirement for the Computer Science course. From now on, I think that it makes sense to **make Further Maths A-level a requirement for the programme**, especially since the seminar series is open to all.

Reflecting on the changes made this year
I think that the changes we made to the structure of the programme and selection this year, greatly improved the scheme.

First of all, by making the seminar series open to all, many more students benefitted from the sessions than would have done so otherwise, and I believe that the students got just as much out of the sessions as they did from the discussion groups last year. These sessions were also incredibly popular, with the least well attended seminar having 124 unique viewers, while the most had 154. These sessions were also recorded meaning that they could be made available to many more students to benefit from (they are currently unlisted on the Department YouTube channel).

Secondly, only one student dropped out of the programme this year (due to a bereavement), compared to five students last year. This meant that out of the 20 participants, 19 submitted completed projects and 16 attended the residential (compared with 15 and 13 last year). This is a marked improvement and clearly shows that selecting students by engagement is the best way forward for future iterations of the scheme.

Possible changes for next time
As discussed, I believe that Further Maths A-level should be made a requirement for the programme. Moreover, I think that high predicted grades close to the entry requirements for the undergraduate course should also be required. This will mean that all students who partake are also eligible to apply to Cambridge for Computer Science. This was not implemented earlier because our goal was Computer Science outreach more generally, however, as the seminar series is open to all, I think it is reasonable to make these changes with the hope of preventing any further disappointment.

Additionally, I think it would be beneficial to add extra sessions for the programme participants after the welcome session, including one session on the independent research project. The aim of this extra session will be to share more details about what is expected of the participants and to share examples of past projects.

HEAT data review (acceptance data not available until end of Oct 2025)
As mentioned above, for the last two years of the programme, we have not required participants to meet the Cambridge Computer Science entry requirements, as we were not solely focused on getting students to apply to Cambridge. This is reflected in the applications data collected from HEAT.

Out of the 15 participants who completed the programme in 2024, 7 applied to Cambridge (and 1 mentioned on their feedback survey that they had decided to apply to Oxford). Two students applied to study Engineering while the others applied for Computer Science. Out of the 7, only 5 studied Further Maths A-level. None of the students received offers.

Full survey response data

Before programme (but after the seminar series)

Questions - answered by all 20 participants	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)	Average
I am thinking about going to university in the future.	1	0	1	7	11	**4.35**
I know what studying at university would be like.	0	3	5	11	1	**3.5**
I know how studying at university is different from studying in school or at college.	0	3	2	15	0	**3.6**
I believe that if I apply to university, I will get a place.	0	1	5	10	4	**3.85**
University is for people like me.	0	0	7	8	5	**3.9**
I would fit in well academically with others at university.	0	1	5	8	6	**3.95**
I would fit in well socially with others at university.	0	1	4	10	5	**3.95**
I know what studying Computer Science at university would be like.	0	6	8	6	0	**3**
I believe that if I apply to university for Computer Science, I will get a place.	0	0	11	6	3	**3.6**
Studying Computer Science at university is for people like me.	0	0	4	11	5	**4.05**
I would fit in well academically with other Computer Science students at university.	0	2	2	11	5	**3.95**
I would fit in well socially with other Computer Science students at university.	0	0	7	8	5	**3.9**

Before residential

Questions - answered by 20 participants	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)	Average

I am thinking about going to university in the future.	0	0	1	7	12	**4.55**
I know what studying at university would be like.	0	2	6	11	1	**3.55**
I know how studying at university is different from studying in school or at college.	0	1	4	12	3	**3.85**
I believe that if I apply to university, I will get a place.	0	0	6	11	3	**3.85**
University is for people like me.	0	0	4	11	5	**4.05**
I would fit in well academically with others at university.	0	0	4	12	4	**4**
I would fit in well socially with others at university.	0	0	6	9	5	**3.95**
I know what studying Computer Science at university would be like.	1	0	11	6	2	**3.4**
I believe that if I apply to university for Computer Science, I will get a place.	0	1	7	9	3	**3.7**
Studying Computer Science at university is for people like me.	0	0	6	9	5	**3.95**
I would fit in well academically with other Computer Science students at university.	0	0	4	13	3	**3.95**
I would fit in well socially with other Computer Science students at university.	0	0	9	8	3	**3.7**

<u>After programme</u>

Questions - answered by 16 participants	**Strongly disagree (1)**	**Disagree (2)**	**Neither agree nor disagree (3)**	**Agree (4)**	**Strongly agree (5)**	**Average**
I am thinking about going to university in the future.	0	0	0	5	11	**4.69**
I know what studying at university would be like.	0	0	0	10	6	**4.38**
I know how studying at university is different from studying in school or at college.	0	0	0	11	5	**4.31**
I believe that if I apply to university, I will get a place.	0	0	2	11	3	**4.06**

University is for people like me.	0	0	1	9	6	**4.31**
I would fit in well academically with others at university.	0	0	3	8	5	**4.13**
I would fit in well socially with others at university.	0	0	3	10	3	**4**
I know what studying Computer Science at university would be like.	0	0	0	12	4	**4.25**
I believe that if I apply to university for Computer Science, I will get a place.	0	0	3	10	3	**4**
Studying Computer Science at university is for people like me.	0	1	2	7	6	**4.13**
I would fit in well academically with other Computer Science students at university.	0	0	2	8	6	**4.25**
I would fit in well socially with other Computer Science students at university.	0	0	5	6	5	**4**

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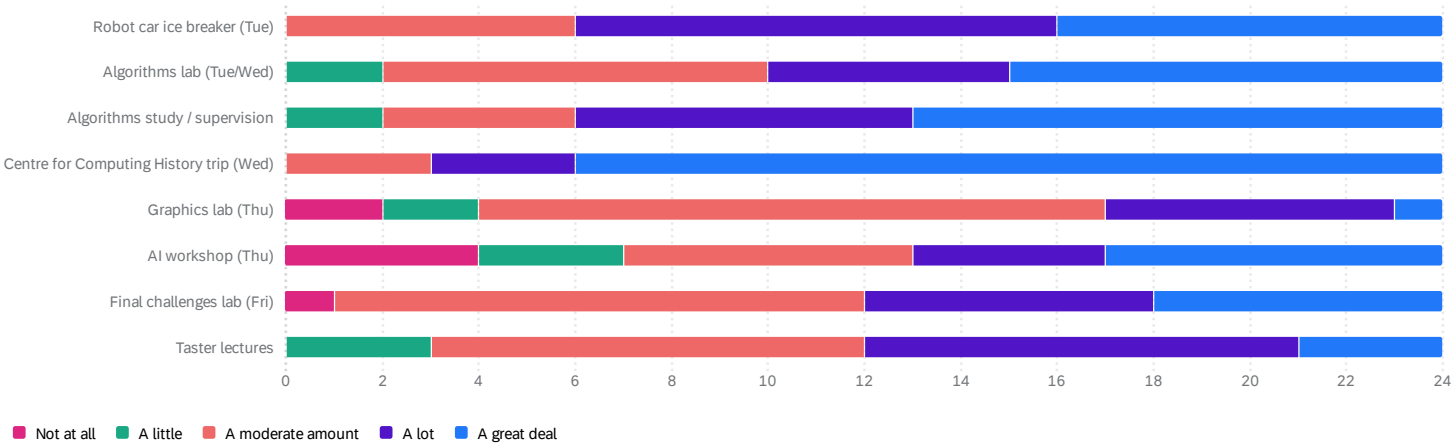
Responses: 24

Please rate the following sessions based on how much you enjoyed them 24



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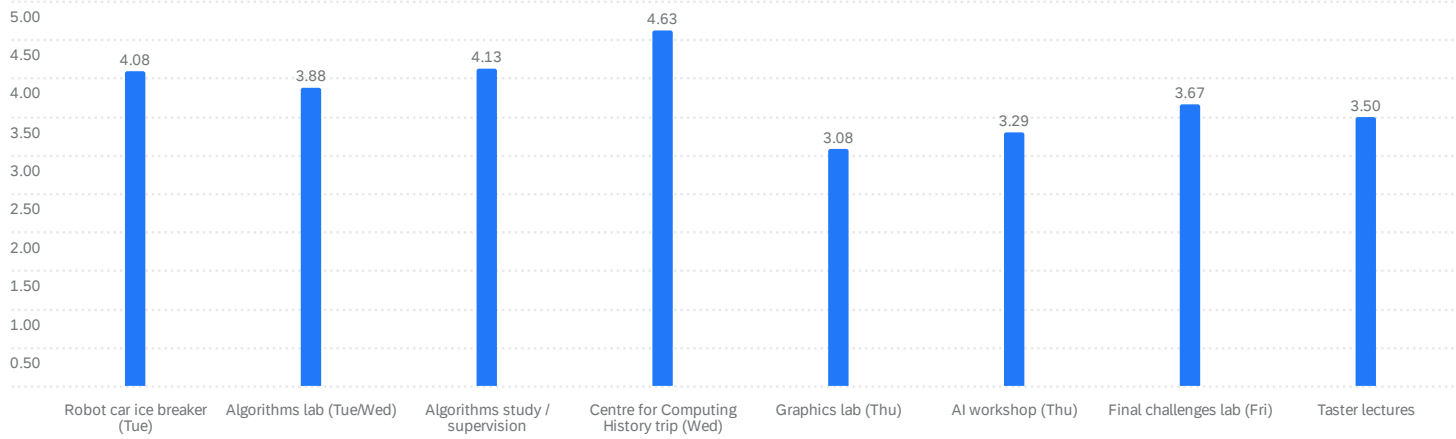
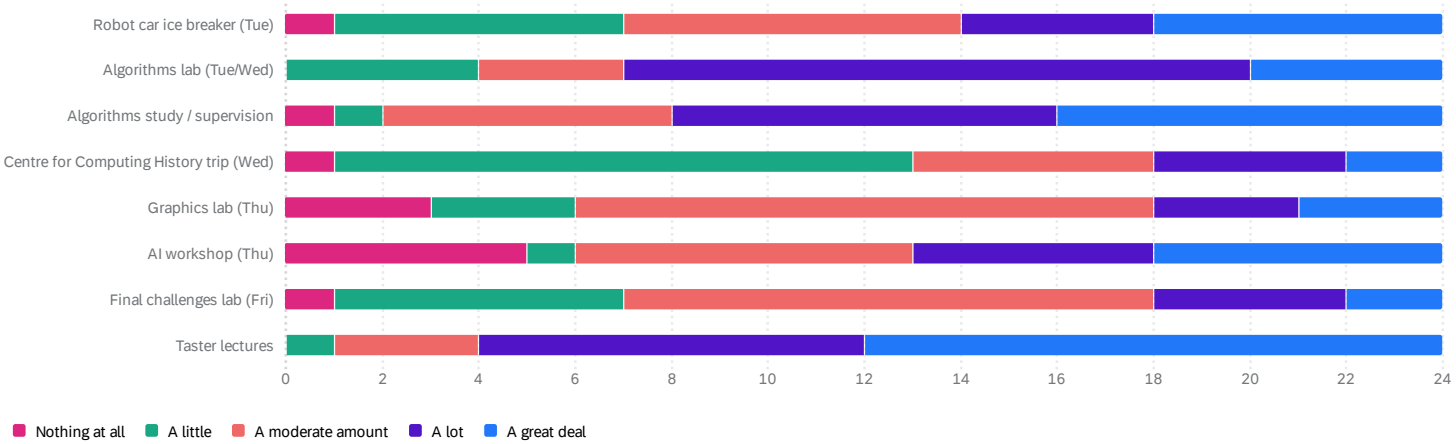


Please rate the following sessions based on how much you learnt 24



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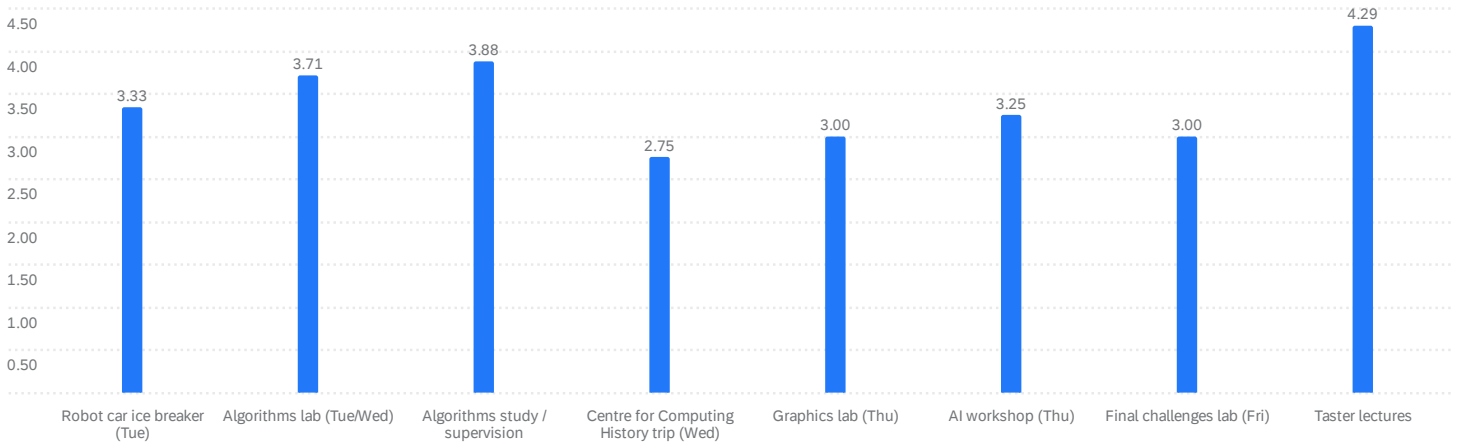
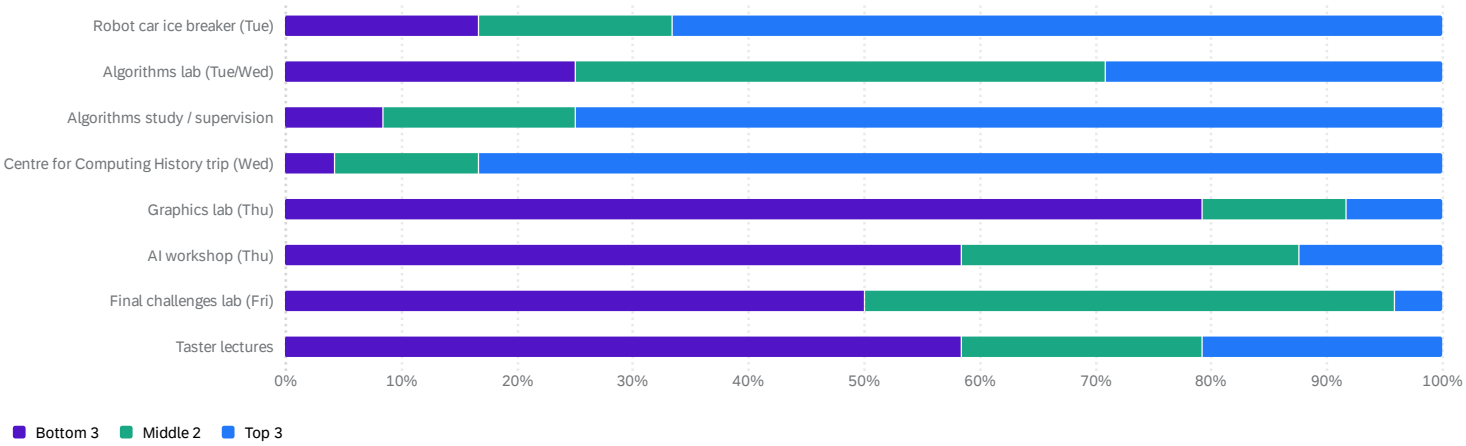


Rank the sessions with your favourite on top and least favourite on the bottom 24



Rank the sessions with your favourite on top and least favourite on the bottom 24

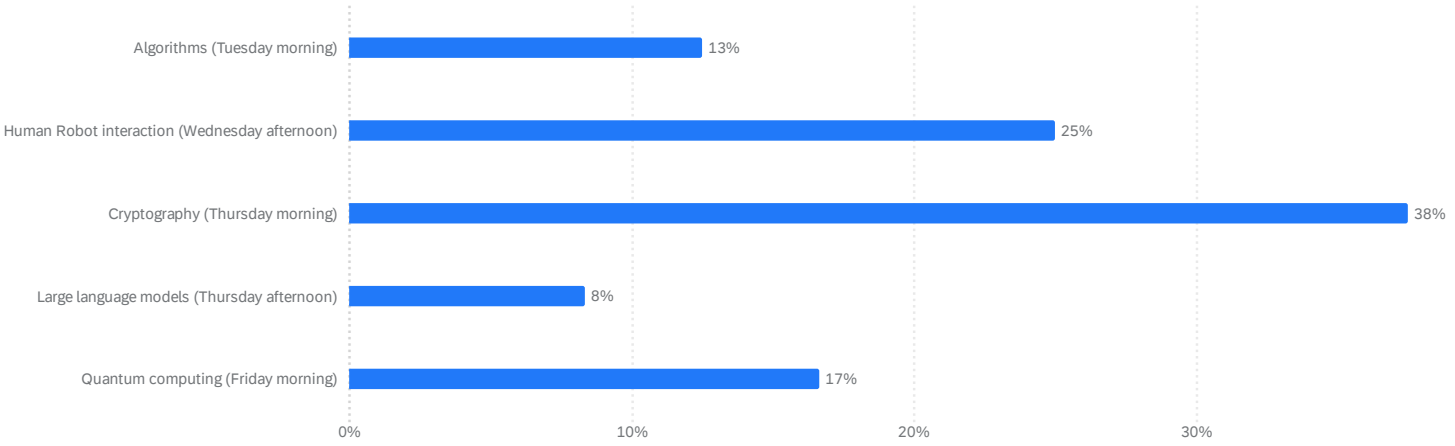
Rank the sessions with your favourite on top and least favourite on the bottom	Ranked in the top 3 positions	Ranked in the centre (middle 2 positions)	Ranked in the bottom 3 positions
Robot car ice breaker (Tue)	67%	17%	17%
Algorithms lab (Tue/Wed)	29%	46%	25%
Algorithms study / supervision	75%	17%	8%
Centre for Computing History trip (Wed)	83%	13%	4%
Graphics lab (Thu)	8%	13%	79%
AI workshop (Thu)	13%	29%	58%
Final challenges lab (Fri)	4%	46%	50%
Taster lectures	21%	21%	58%

How would you rate the difficulty of the material you learnt in the lab sessions? 1 = "Too easy, I knew it already" 5 = "Too hard, I couldn't understand any of it"

24

How would you rate the difficulty of the material you learnt in the lab ses...	Average	Minimum	Maximum
Algorithms lab	2.58	1.00	4.00
Graphics lab	2.71	1.00	4.00
AI workshop	2.83	1.00	5.00
Final challenges lab	2.67	1.00	4.00

Which lecture was your favourite? 24



What was the best thing about the summer school? 24

What was the best thing about the summer school?

The trip to the CS History Centre. It was so interactive and there was so much to do. MY favourite part was the megaprocessors, seeing all the components and wiring on a larger scale helped me understand CPU architecture a lot better

Getting to have the lectures to learn these new concepts or at least learn more ontop of these concepts, and then being able to go and potentially develop on those skills.

Going to the center of computing history

Getting to experience so many aspects of student life here

The opportunities to talk to students and professors and gain extremely valuable insight on applications and subject topics.

For sure meeting many like great minded people

Using and coding microbits

The museum was quite fun and informative on the history of computers.

What was the best thing about the summer school?

Speaking to the coordinators and asking questions about the application process

I really enjoyed experiencing life as an undergraduate Cambridge student. It allowed me to understand how studying here would be like, through the lectures and supervisions. And not just studying, but also the social aspects such as the games night and learning traditions here like the formal dinner.

The helpers were really helpful!

the quantum computing lecture was really inspirational and motivated me towards a specific field withing computer science and I was really engaged throughout

cant list one thing, a lot

Helpers were helpful for when I got stuck

The Lectures

computer trip

the atmosphere of being a Cambridge student for a week

People, colleges, dept.

The robot car was fun and supervision was very fun

Social environment

Centre for Computing history trip

museum trip

Definitely the detailed taster lectures

the supervision

Was there anything that we could have done better? 20

Was there anything that we could have done better?

Some of the lectures were a bit too lengthy, too broad (covered many topics at surface level rather than honing in on a few), too inaccessible (lacked necessary grounding to make content accessible)

Adding more of the lecturers powerpoints to the website so that we can use these for study at a later date.

Add more practical work

Can't thing of anything except maybe if the AI lab activity had worked

Was there anything that we could have done better?

More time to see Cambridge as we didn't really get to see much and were on the outskirts mostly.

Perhaps try have more interactivity in the lectures

Less lectures,more activities

Maybe some more free time to check out certain colleges. We had no access to some colleges even though we were part of the sutton trust summer school so maybe if we had permission to see some colleges it would be an even better experience. Also maybe make it more clear whether or not something is halal.

Give pre-reading before the lectures to understand them better

Everything was planned and carries out amazingly! My only problem was the constant silverfish in my accomodation. Although the 24/7 number was helpful and changed my room to an even bigger space, there still turned out to be silverfish in my room, which made sleeping peacefully difficult on top of the packed schedule.

Also the food was quite bland at times, such as the white rice and curry. Lacking flavour.

Overall amazing experience though. Apart from the silverfish. (Found one crawled inside my suitcase too, very disturbing.)

AI Workshop / LLM

possibly have less graphics questions and more logic based ones. Timed challenges?

lectures were a bit boring

More guided programming

some lectures were slightly too long

More time in other colleges/city

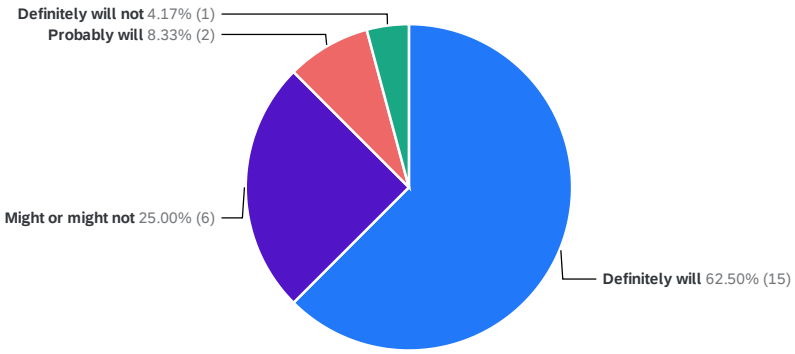
lectures should have had hands on experiments integrated within them, also i would have enjoyed if we did a lot more robotics and cool stuff, extensions to the raspberry pi so we could build cool stuff.

More freedom with timetable, not requiring staying in room during quiet time

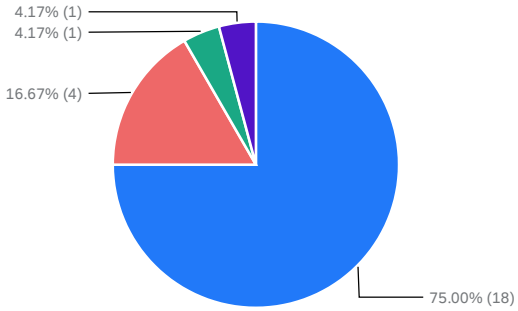
I wanted to try the AI bot, but it wasnt working for us

(Obviously hard to account for but we wasn't able to do the AI workshop which I was excited for)

Will you apply to study Computer Science at university? 24

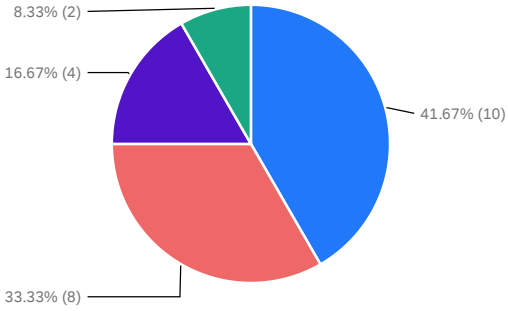


Has being a part of this summer school changed your mind about applying to study Computer Science? 24



No, I wanted to apply before and I'm still planning to apply
Yes, I wasn't sure about applying and now I'm planning to apply
No, I wasn't considering applying before and am still not planning to apply
Yes, I wasn't sure about applying and now I'm not planning to apply

Has being a part of this summer school changed your mind about applying to Cambridge? 24



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Do you have any other comments? 9

Do you have any other comments?

Thank u! - gracie :D

Thank you for all of the awesome work this week! It has been brilliant and I have loved it.

very good stuff

Thanks for the oppurtunity.

Thank you for this amazing opportunity!!

thank you so much for your time and contribution.

Only reason I don't think I will be applying for computer science is because I have a subject that interests me more, that wasn't an option for summer school. But still it was interesting

Say thanks to Tim and the Team from me.

above response is due to my own incompetence not a problem with the program