

NEWSLETTER

'He who can no longer pause to wonder and stand rapt in awe, is as good as dead; his eyes are closed'

Albert Einstein

Week 38 2022-23

ARTIFICIAL INTELLIGENCE FOR A BETTER FUTURE



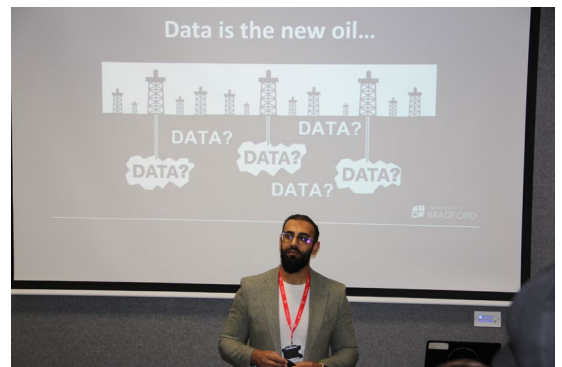
AI FOR GOOD

Einstein suggests we should pause a while, gaze, consider and open our eyes. 'Awe', as defined by The Cambridge University Press dictionary is a feeling of great respect, usually mixed with fear or surprise. This edition of the newsletter focuses on Artificial Intelligence. AI is certainly provoking these emotions – excitement, trepidation, respect and surprise as we learn its capabilities. Rishi Sunak, our Prime Minister, is currently discussing the regulation of AI with the President of the United States as well as a planning a summit in London in the autumn. The Computer Scientists who helped to build AI, are today warning about its dangers.

Nevertheless, it is clear that AI will impact our futures in ways we cannot yet fathom. Therefore, we need to learn and discover its strengths and weaknesses. CATS Cambridge students are challenging themselves to research the issues surrounding this technology so that they are well placed to face the future. In this edition of the newsletter, we can see how our visiting speaker, Dr Kamran Mahroof, approached the topic as well as groups of students in ESL classes. We also celebrate achievements in the Chemistry Olympiad, share some photos of the Prom and a recent visit to Jesus College. Finally, pause a while and explore the idea of 'awe' with the Principal in his back page article. and rapt in awe,

We were pleased to welcome Dr Mahroof, Associate Professor in Supply Chain Management at the University of Bradford, for his second visit to our campus. He engaged our students on the most spoken about topic of the day: Artificial Intelligence. The focus was on AI for the good of society.

Dr Mahroof spoke about current projects where AI is making things better, more efficient, or more reliable. For example, more accurate forecasting models for water management, better earthquake detection, increased agricultural yields and reduced food waste. An AI jellyfish-bot is even being used to clean the oceans. The bot uses the same principle a jellyfish uses to catch nutrients in order to pick up waste particles in the water. Dr Mahroof emphasised the idea that these technological developments were all in their early stages. There is so much more to do and so much more to learn. Our students are in the perfect position to join AI related courses and be at the forefront of this new future.



Source – Dr Mahroof's slides 30.05.23



STUDENT ACHIEVEMENTS

Classroom Projects

Aware of the importance of Artificial Intelligence and the need to find out more, several groups of students decided to research more in their ESL presentation projects. One group chose the impact of AI in the aerospace industry, another focused on the car industry and a third on the importance of AI in society in general.



Aleesya with her group poster (front page). Jocelyn and Kevin working on their groups poster (above). Anastasia with her group poster (below)



Chemistry Olympiad



Many congratulations to the following students who all achieved a Bronze award in this year's 2023 U.K. Chemistry Olympiad. The Chemistry Olympiad is an external exam, organised by the Royal Society of Chemistry.

Rachel, Emir, Gabriel, Wan Qi

The topics covered in the 2023 paper included rocket fuels, electronegativity, amino acid complexes, vaping and cheese.

Electronegativity is a timely topic as it was the 90th anniversary of Linus Pauling's proposing the concept of electronegativity in 2022. With the 2023 International Chemistry Olympiad being held in Switzerland, a question on cheese was obligatory, and students were quizzed on the conversion of lactose to lactic acid during fermentation in cheese manufacturing.

Thanks to Dr Mike Liptrot for supporting the students in this endeavour [you can see Dr. Mike doing what he does best in the pictures above and below!]



SUMMER BALL

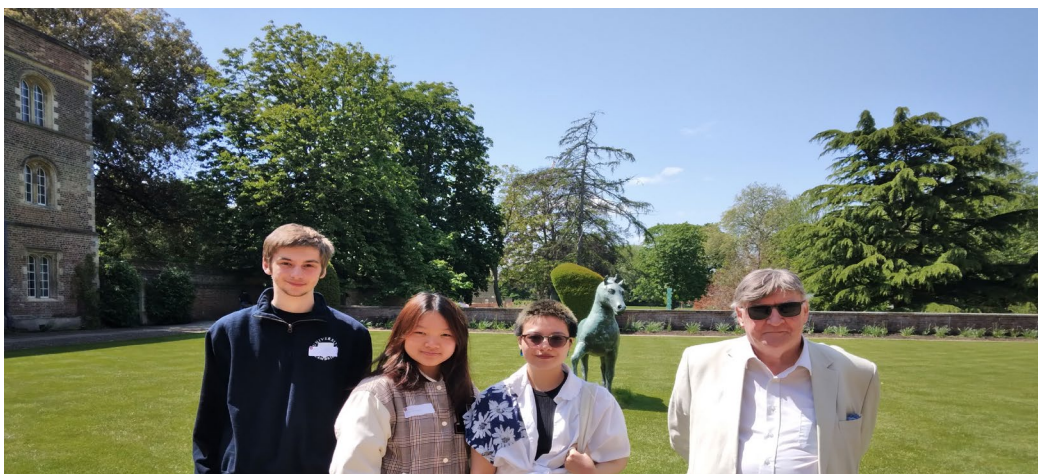
CATS Cambridge Students dressed to impress as members of our graduating cohort and friends enjoyed an evening of dining, dancing, socialising and celebrating.

After a drinks and nibbles reception in the Elizabeth House, we travelled to the Clayton Hotel in Cambridge where we dined and danced the evening away.



AN ENLIGHTENING DAY

A visit to Jesus College



CATS Cambridge Head of Humanities and Jesus College alumnus Dr Eric Boston with students Gabriel, Rachel and Taisiya in front of the iconic bronze horse statue in First Court of Jesus College, which was founded over 500 years ago.

On Sunday 4th June, CATS Cambridge Head of Humanities Dr Eric Boston and House Director Hayley Pienaar accompanied three CATS students to a talk on careers in journalism and media in the Master's Lodge at Jesus College where the Master, Sonita Alleyne, interviewed BBC Three Controller, Fiona Campbell.

Fiona Campbell provided valuable insights into her role, which primarily revolves around launching shows that resonate with the younger demographic, especially those under thirty-five. She emphasised the importance of giving back and embracing new possibilities. Campbell encouraged students to be prepared for hard work, persistence, and the willingness to undertake various tasks, even if they may seem mundane, like making tea! She stressed that *success in the industry is earned through dedication and effort*. Additionally, Campbell underscored the significance of networking and seeking assistance when needed.

Given her background as the former Digital Director of BBC News, Campbell brought a wealth of experience to the discussion. Her early career involved producing current affairs and documentary films across various locations in Europe, Africa, Afghanistan, Iraq, Kosovo, and Cambodia. Notably, she specialised in undercover crime investigations, showcasing her breadth of expertise.

Motivating the students to take action, Campbell encouraged them to engage in activities that would enhance their skills and fuel their passion for journalism and media. She suggested writing for the student newspaper, organising plays, hosting podcasts, creating Instagram pages, participating in team-orientated projects, and even practising movie-making using their smartphones.

Campbell's underlying message was clear: *self-belief and unique ideas are valuable assets* in this ever-evolving industry.

For those interested in exploring career opportunities in media and journalism, further information can be found at the following link: [BBC Careers](#)



**Dominic Tomalin,
Principal**

The Awesome Everyday



I recently came across a book entitled, 'Awe, the transformative power of everyday wonder'¹. Awe is that feeling of being in the presence of something vast that transcends your current understanding of the world. Such experiences are said to be transformative as they quiet 'the nagging, self-critical, overbearing, status-conscious voice of our self, or ego, and empower[] us to collaborate, to open our minds to wonders, and to see the deep patterns of life'.

At this point it is important that I make it clear we are not talking about 'awe' in the sense of 'shock and awe'. The author of the book invests some energy in explaining that the negative connotations of the word arise from the timing of its absorption into the English language. He points out that it is derived from the arcane words, 'ege' and 'agi', both of which aim to communicate a sense of dread, fear and horror. Hardly surprising as 'awe' seems to have emerged some 800 years ago during a time of pestilence, famine and public torture, in short, it was a horrific time to live.

In contrast, research into what is felt to be 'awesome' right now, suggests that it is but one of 27 distinct emotional states, and that it is reported as having a closer association with aesthetic appreciation, feelings about beauty and the intrinsically good, than with horror and anxiety. Respondents in an experiment, prompted by 2,100 GIFs, 2-3 second video snips, suggested that 75% of 'everyday awesome' is purely positive, only 25% of reported experiences were flavoured with 'threat'. These days we are more likely to be awe inspired than awe terrified.

The book posits 8 categories of everyday awesome: Moral beauty, collective effervescence, nature, music, visual design, spiritual, life and death, epiphanies, and a ninth is left for 'other'. I am always a big fan of the contents of 'other', about which not much is offered, but I also rather liked the notion of feeling awe arising from collective effervescence, which is noted as a sense of being part of the 'oceanic we'; you are not alone, we are all in this together.

The common theme though, is that awe is a source of feeling that there is something beyond ourselves. It prompts and encourages us to seek to understand beyond ourselves. A sense of awe galvanises us to find out more, it reinvigorates our sense of being and it compels us to make the most of being alive.

The most telling conclusion from the book is that we really don't need to look hard to find the awesome in everyday life. Have fun finding the awesome all around you, acknowledge it, let it quiet 'the nagging, self-critical, overbearing, status-conscious voice of [y]our self, or ego, and empower[] [you] to collaborate, to open [y]our minds to wonders.' Let it motivate you to discover and become the best version of you, the best you. The awesome is closer to hand than you might think, keep an eye out for it.

¹KELTNER, D. (2024) Awe: The transformative power of everyday wonder. PENGUIN.