



Imperial × Cambridge Makeathon

14 TO 15 MARCH 2026 · CAMBRIDGE

INTRODUCTION

In March 2026, the Mechanical Engineering Society at Imperial College (MechSoc) collaborated with the Cambridge University Engineering Society (CUES) to host a makeathon where students spent two days building Arduino-powered devices to improve student wellbeing.

We took around forty students up to Cambridge for the weekend (though not before twenty Mormons briefly commandeered our coach!). The trip was all-inclusive, with heavily subsidised travel and accommodation so that there was no financial barrier to participation. We split everyone into sixteen teams of four, pairing two from Imperial with two from Cambridge.

THE BRIEF

Roughly a quarter of students report a diagnosed mental health condition, and many say their physical health has slipped since starting university. To tackle this, we asked each team to build an Arduino-powered wellbeing device using software such as MATLAB or Simulink to collect data and model the system, plus any hardware they needed to bring the product to life. They had two days to build a fully functional physical prototype and the software to back it up. Teams were scored out of 65 points across five categories, two of them carrying a runner-up prize of their own.

Creativity of solution		10
MATLAB / Simulink integration ★		15
Hardware implementation ★		15
Relevance to brief		10
Presentation and aesthetics		15



Organisers from both societies, with the MathWorks judge, ahead of the briefing.

Within a few hours every team had settled on an idea and started building.

We handed each team an Arduino and a box of parts including heart-rate and temperature sensors, accelerometers, ultrasonic rangefinders, touch pads, screens, haptic motors and buzzers. Students accessed MATLAB and Simulink through their university licences, and the MathWorks Arduino support packages helped them get readings off the breadboards.

We had three 3D printers running throughout the weekend. Teams sliced their own files and booked a slot, and we ran the prints and handed the parts back. We also ran a supervised soldering station in the Dyson centre.

Organisers from both societies spent the two days going round the benches, checking whether teams needed parts or a hand with the electronics, and making sure people were enjoying themselves (and not blowing things up). The teams ended up helping each other as much as we helped them, passing on whatever they had worked out about the sensors and the boards.

SATURDAY 14 MARCH

10:00	Registration
10:30	Briefing
11:00	Icebreakers and hacking
12:00	Lunch
13:00	Hacking, to 18:00

SUNDAY 15 MARCH

09:00	Hacking
12:00	Lunch
13:00	Hacking and submission
15:00	Judging and awards



Jo Nestor, one of our organisers, eloquently explaining the task to the participants.

A few things didn't go according to plan. A few Arduinos turned up without USB cables, so we asked everyone to bring their own and kept a handful spare. Teams worked around the odd dead sensor or failed print, and a few spent Saturday evening deciding which parts of their product to prioritise.

Since no one was allowed to work overnight, people scattered across Cambridge for dinner and a walk along the Cam before meeting back at our hostel. Everyone spent a couple of hours discussing the day and playing games before turning in for the night.

The next day, everyone picked the work straight back up with only a short break for lunch (burritos!). The last few hours had people running back and forth, casings being glued, slides being written, and everyone racing the 3PM deadline.



One of the Imperial students on the verge of solving the Riemann Hypothesis.

THE BUILDS

It was amazing to see how differently the teams interpreted the brief. No two prototypes looked or worked anything alike, and each one went after a problem its team had run into and thought worth solving.

DormoBand clipped an Arduino Nano to the nightstand and streamed humidity, movement and sound into a MATLAB dashboard that scored the night's sleep across five dimensions. EyeMaxxer's team generated the firmware straight out of a Simulink model rather than writing it by hand. The device tracked screen distance and head posture to catch eye strain before it set in.

StudySense focused machine learning on the desk itself, spotting the moment attention drifted and pulling it back. The Cat Cycle read the vibration signature of a washing machine to tell you the moment your laundry was done, and Sunshine and Cupcakes paired a desk sensor with a browser extension that met a doomscroll with ten seconds of guided breathing.



Teams presenting their builds with unprecedented enthusiasm.

AWARDS

At 3PM on the Sunday the work stopped and the pitching began: three minutes to present, two to answer questions, in front of a panel that included a judge from MathWorks alongside organisers from both societies.

Once we had seen all sixteen pitches, three teams came away with prizes.

BEST OVERALL PRODUCT	Serenikitty: Amish Hurry, Kriskin Fernandes, Nalin Atmakur, Denis Romain
BEST HARDWARE IMPLEMENTATION ★	VibeCheck: Tyler Taylor, Orhan Chowdhury, Shreyas Mone, Azlan Shah
BEST MATLAB / SIMULINK INTEGRATION ★	EyeMaxxer: Martin Stoynev, Alim Azit Aswani, Maxell Fanson Suharsono, Jeremy Kek, Tiance Zhu

We handed out £500 of prizes to the winners, and MATLAB caps, stickers and other merch made their way round the room.

A special thank you to Leonard Fuller, whose gift to MechSoc paid for the weekend, and to the Old Centralians' Trust, which holds and awards the fund for exactly this sort of thing. We're also grateful to MathWorks and to CUES (particularly Hanzhang, Xiaoli, Om, Galen, Connie and Oishi!), who found the space and helped us pull this off.

We're very much looking forward to making this an annual tradition!



Serenikitty, the overall winners, with Sanan, one of our organisers.

