



CASE STUDY: Think Engineer

As Event Coordinator at UTC Reading missing a couple of days generally means you've missed at least a handful of exciting projects, events or talks. Imagine then taking a break of a year (I was not idle, I had a baby!) and coming back and trying to get your head around everything that has been happening in your absence. It's incredible what has been going on here!

One of the most exciting collaborations in the last year has been between UTC Reading and Think Engineer. Think Engineer is a team of engineers specialising in Internet of Things, product prototyping and machine learning. UTC Reading had previously worked with Think Engineer in 2017, when they were involved in a Co-Teach programme, providing invaluable real world relevancy to the Year 13 Engineering curriculum. In addition to this they were always on hand to help at our Taster Events, Careers Fairs, talks and workshops.

In 2018 Think Engineer turned this engagement up a few notches. In the summer they worked with a group of seven students on Think EnJunior – a four week summer work experience project. The students, Ben Emmons, Ilyas Sung, Benjamin Lewis, Oliver Beardsall, Reilly Hewitson, Isabella Cousineau and Micah Barendse, were given a brief, to design a Smart Cat Flap, and were assisted by Steve Samuels from Think Engineer who acted as technical lead. Charlie Myall, Business Development Manager from Think Engineer, acted as the customer, setting the parameters for the brief.

Innovation Catalyst (www.innovationcatalyst.spaces.nexodus.com/en), who, with Vital Six (www.vitalsix.co.uk), run an open co-work space at Thames Valley Science Park, provided the premises for the students to work from. The students were taught the electronics, coding practices and 3D design and printing required and were introduced to PCB design and cutting-edge cloud technologies, but were left to their own devices to come up with a solution. This was an amazing opportunity for the students involved.

They did a good job, despite not quite managing to get all the different strands of the project tied together. Charlie's feedback on the project was:



WE AT THINK ENGINEER THOROUGHLY ENJOYED WORKING WITH THE ENERGETIC AND ENTHUSIASTIC TEAM ASSEMBLED BY UTC READING. THE FEEDBACK WE HAD FROM THEM WAS EXTREMELY POSITIVE, THEY HAD FOUND WORKING TO STRICT PROTOCOLS, WIRE-FRAMING AND DEFINING INTERFACES FIRST TO BE CHALLENGING INITIALLY. ONCE THEY SAW THE BENEFITS LATER IN THE PROJECT WHEN CHANGES HAD TO BE MADE THEY SOON SAW THE REASONING. EVERYONE LEARNED A NEW SKILL, LANGUAGE OR TECHNIQUE. THE 3D DESIGN AND PRINTING, FOR WHICH A VISIT TO THE THINK ENGINEER LAB WAS REQUIRED, WAS GREAT FUN. WE ONLY HOPE THE STUDENTS ENJOYED THE PROCESS AND HAD AS MUCH FUN AS WE DID. WE KNOW THEY LEARNED A LOT.



Charlie Myall,
Think Engineer

We're in discussions with Think Engineer about how this can be continued so that the students can complete their project. The feedback from Think Engineer and Innovation Catalyst is wonderfully positive. The students made a great impression, using the coding skills that they already had and developing many new skills to help them to complete the brief. Think Engineer are keen to do a project like this again and we'd love to offer this opportunity to another cohort of students in 2019.

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Think Engineer's engagement with UTC Reading did not stop there. On 15 September UTC Reading students ran a Hackathon here at college, entitled The Grand Hack. 40 people were in attendance, students from UTC Reading and Kendrick School. They were given a brief to design an innovative product using IoT.

In attendance to provide invaluable expert assistance were Erica Purvis from Technical Nature, a sustainable business consultancy, Ed Cooper from VitalSix, Adam Clark from Ooba Creative, a marketing consultancy, Anthony Bardos from the Institution of Engineering and Technology (IET) and Charlie Myall from Think Engineer. Think Engineer also brought along cap-hats, a hat accessory they developed for Raspberry Pi/SOCs, which is a touch pad for entering the digits 0-9, for the teams to use.



I AM ALWAYS INSPIRED BY THE INSIGHT, CREATIVITY AND INGENUITY OF THE NEXT GENERATION - ESPECIALLY AT UTC READING. THE WHOLE EVENT WAS ORGANISED, RUN AND EXECUTED BY SOME INCREDIBLY TALENTED STUDENTS. A TESTAMENT TO THE UTC APPROACH AND THE CALIBRE OF STUDENTS INVOLVED, AN EXCEPTIONAL DAY.

Adam Clark,
Ooba Creative

On all accounts it was a brilliant event and completely organised by UTC Reading students, great to see such initiative. I cannot wait to be involved in the next events here at UTC Reading and look forward to working with Think Engineer, Innovation Catalyst, VitalSix, Ooba Creative and all the rest of our amazing industry partners again.



IT WAS GREAT TO PART OF THE GRAND HACK HELD AND ORGANISED BY STUDENTS AT THE UTC. THEIR COMMITMENT AND ENTHUSIASM REALLY IMPRESSED, ALONGSIDE THEIR INTEREST IN THE SUSTAINABLE DESIGN TALK AND GUIDANCE I SUPPORTED WITH, REFLECTED IN MANY OF THEIR FINAL IDEAS AND PITCHES.

Erica Purvis,
TechnicalNature



Amy Sutcliffe, Event Coordinator UTC Reading.