St. Anselm's College
Wednesday 30 March 2022

Programme of Activities

09.40 – 10.00   Arrival in our Lab & Welcome
(including security induction & account registration)
10.00 – 10.55   **Workshop 1: Bluetooth: From ad-hoc networks to Covid**
10.55 – 11.00   Break
11.00 – 11.55   **Workshop 2: A Sort of TikTok**
11.55 – 12.45   Lunch Break
12.45 – 13.40   **Workshop 3: Mobile App Development**
13.40 – 13.45   Break
13.45 – 14.50   **Workshop 4: Lego EV3 Drives the Warehouse**
14.50 – **15.00**   Closing Talk

All workshops take place in Lab 3 of the George Holt building.

Information about the Activities

Bluetooth: From ad-hoc networks to Covid

Bluetooth has become a very popular technology, not least because of its great versatility. In this hands-on "maker" activity, pupils explore on Raspberry Pis how to communicate over Bluetooth and how to use signal strength for measuring distance; the same principle that enabled the NHS Covid App.

A Sort of TikTok

TikTok's For-You page tries to show the user videos that they will most likely want to watch. At the heart of this feature lies the task to quickly sort the huge collection of videos on the platform by the likelihood that this user will watch them. In this activity, pupils explore different sorting algorithms solve that task more or less efficiently, and how TikTik might compute the probability that a user likes a certain video.

Mobile App Development

Apps on smartphones have broadened the audience of computer programs like hardly any technology, making computers more intuitive and easy to use than ever. In this activity, pupils will create a real app, working on their own devices (or our provided tablets), to help colorblind people. They will experience first hand how user interfaces are created from components, and that an easy-to-use interface is often the result of hard work.

Lego EV3 Drives the Warehouse

Robots managing large warehouses are one of the many example where automation helps humans to solve a task faster and cheaper. For this to be effective, robots need to be at least partially autonomous, i.e. able to sense and react to the physical world without (constant) human intervention. In this hands-on lesson, pupils program Lego EV3 robots to follow a line, avoid obstacles, and ultimately navigate a warehouse safely and autonomously.