



Wednesday 12 March 2025
St Michaels

Programme of Activities

10.00 – 10.15	Arrival in our Lab & Welcome (including security induction & account registration)
10.15 – 11.00	Workshop 1: Introduction to Machine Learning (Matt)
11.00 – 11.30	Giant Sorting Network (outdoor activity)
11.30 – 12.00	Lunch Break
12.00 – 12.45	Workshop 2: Algorithms (Rabeea)
12.45 – 13.45	Hands-on Workshop: Lego EV3 drives the warehouse
13.45 – 14.00	Closing Talk

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

Information about the Activities

Introduction to Machine Learning

Introduction to Machine Learning (ML) is a hands-on and engaging session introducing Year 9 students to the exciting world of Artificial Intelligence (AI). The lesson includes real-life examples, a case study in the construction industry, and a practical exercise in image recognition. Students will explore how Machine Learning works, its applications, and its challenges. This lesson will delve into AI's potential and pitfalls, and students will learn how this technology can be applied in their lives.

Giant Sorting Network

In this outdoor lesson, pupils will play the role of the “compute nodes” in a parallel sorting algorithm. They will experience first-hand how parallelism speeds up computation, but also makes it more challenging to reason about programs.

Algorithms

When technology makes decisions for us, for example recommending a video to someone on social media or finding the fastest way home, it will use algorithms. They are many algorithms that influence our daily life and helps technology think for us. During this lesson students will explore how algorithms process data and make automated decisions. They will focus on recommendation systems used by social media and then will attempt to stimulate a technology/algorithm that will analyse a user's preferences.

Lego EV3 Drives the Warehouse

Robots managing large warehouses are one of the many examples 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.