

Machine Learning Club

Sessions Overview

Through a series of entertaining and educational workshops, based on practical hands-on experiences, this course is designed to give an appreciation of how the Machine Learning Industry contributes to our lives, for pupils to gain an insight into a range of related careers.

Breakdown of Sessions for the Machine Learning Workshops:

Session 1: Natural Intelligence

Learning opportunities include:

- Industrial Robotics
- Artificial Intelligence
- Robotic systems

Session 2: Introduction to Robotics

Learning opportunities include:

- What is a robot?
- The essential characteristics of robots
- Recognising that robots rely on instructions
- That programs require thorough testing

Session 3: Sensing

Learning opportunities include:

- How robots sense their surroundings
- An introduction to electronic circuits
- Designing and modelling a switching solution

Session 4: Movement

Learning opportunities include:

- Looking at how robots move
- Comparing human/animal movement to robots
- Using human walking to model robotic movement
- Using Stop Motion to review solutions

Session 5: Energy

Learning opportunities include:

- Reviewing the choices of energy source to power robots
- Looking at battery cells and how they work
- Exploring sensing electronics including how transistors work

Session 6: Robotic Intelligence

Learning opportunities include:

- Introduction to Systems – Input/Process/Output
- Creating instructions for robots to carry out a range of tasks