Artificial Intelligence (AI)

Discover how machines learn from data — and how people can use AI creatively, critically and responsibly.

What is artificial intelligence?

AI refers to computer systems that perform tasks usually requiring human intelligence: recognising speech and images, understanding language, spotting patterns, making predictions and generating content. Much of today's AI uses machine learning to find patterns in data; generative AI creates text, images or code. AI already supports healthcare, transport, scientific research and creative work. It is a tool for people, not a substitute for human judgement, fairness or responsibility.

Why does it matter?

AI is one of the UK government's six priority frontier technologies. Young people will encounter it in many careers, not just computing. TechFirst encourages them to understand what AI can do, recognise its limitations and consider privacy, bias, misinformation and safe use.

Our TechFirst AI activities

DISCOVER · 45 MIN · KS3 | TF-AI-DIS-001

Discover Artificial Intelligence

Students distinguish AI-generated from real images, explore everyday uses and AI-related careers, then play a one-word-at-a-time story game to understand pattern-based prediction.

EXPLORE · 60–75 MIN · KS3–KS4 | TF-AI-EXP-001

Become a Human LLM

Teams act as a language model, using word choices, prompts and context to see how plausible text is produced — and why predictions can still be inaccurate or biased.

EXPLORE · 60–75 MIN · KS3–KS5 | TF-AI-EXP-002

Would You Trust the Car?

Students examine difficult decisions facing AI-enabled autonomous vehicles, weighing safety, uncertainty, evidence and ethics before defending their choices.

EXPLORE · 60–75 MIN · KS3–KS5 | TF-AI-EXP-003

Ocean Explorers (IBM-inspired)

A proposed team-based ocean-science challenge, inspired by IBM's Mayflower Autonomous Ship: students classify marine research observations and consider how AI can support conservation.

EXPLORE · 60–75 MIN · KS3–KS5 | TF-AI-EXP-004

Prompt Lab: Get Better Answers from AI (IBM-inspired)

A practical, team-based generative AI activity adapted from IBM SkillsBuild prompt-writing and prompt-engineering learning. Learners use a browser-based large language model (LLM) to discover, by experimentation, how the quality of an instruction changes the usefulness of the response.

How we learn

Our coach-led sessions use a simple tell–do–reflect approach: introduce an idea, try a collaborative challenge, then discuss what worked, what surprised students and where the technology could lead. Activities build curiosity, creativity, communication and critical thinking.

For schools, students and employers: discover the programme and enquire about taking part at techfirst@digitalinnovators.co.uk