

1:1 Personalised Roadmap

Advanced Robotics & Intelligent Systems

One-Year Personalised Roadmap

Ages 16+

Robotics & AI Roadmap

A personalised, project-based journey through electronics, coding, artificial intelligence, 3D design and intelligent robotics.



16+

AGE GROUP

12

MONTHS

2 / week

SESSIONS

60 min

PER SESSION

4

LEARNING PHASES

1:1

PERSONALISED

Capstone

FINAL ROBOT

Programme Overview

Students move from microcontroller projects to a complete talking AI robot, combining electronics, coding, AI and 3D design in one continuous, project-based path.

Final capstone robot can:

- See and detect people
- Listen to voice commands
- Think and generate responses
- Speak naturally
- Move and interact with its environment

One-Year Learning Roadmap

Students progress from microcontroller projects to building a complete talking AI robot that can see, listen, think, move and respond.

- 1 Engineering, Coding & AI Foundations**
Months 1–3: Electronics, Arduino/ESP, Python, C++, AI fundamentals, GUI development.
- 2 Intelligent Robotics & Computer Vision**
Months 4–6: Machine learning, image classification, sensors, face & person detection.
- 3 3D Design & Robot Prototyping**
Months 7–9: Generative AI design, Fusion 360, 3D modelling & printing, prototyping.
- 4 Voice AI & Talking Robot**
Months 10–12: Raspberry Pi, speech recognition, NLP, LLM integration, text-to-speech.

Skills Students Gain

Electronics & Microcontrollers

Python & C++ Programming

Machine Learning

Computer Vision

3D Design & Printing

Raspberry Pi

Voice AI & LLM Integration

Robotics System Integration

Technical Documentation & Presentation

Engineering & Problem Solving

Programme Details

Level

Intermediate to Advanced

Format

Personalised · Project-Based

Duration

12 Months

Tools

Arduino/ESP, Raspberry Pi, sensors, camera, motors, 3D printing

Schedule

2 sessions/week · 60 min

Includes

Four phase projects + final AI robot + student portfolio

Build Real Projects · Learn by Doing · Think Like an Engineer

Start Your Robotics & AI Journey

Enroll Now

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