



ROBOTICS & AI COURSE

ONE-YEAR PERSONALIZED ROADMAP

16+ YEARS

ROBOTICS & AI ROADMAP

BUILD. CODE.
DESIGN. CREATE.



A personalized, project-based journey through electronics, coding, artificial intelligence, 3D design, and intelligent robotics. Students progress from microcontroller projects to building a complete talking AI robot that can see, listen, think, move, and respond.

16+

AGE GROUP

12

MONTHS
DURATION

2

SESSIONS
PER WEEK

60

MINS /
SESSION

4

LEARNING
PHASES

1:1

PERSONALIZED

✓

CAPSTONE
PROJECT

PROGRAM 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

- 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
- ✓ Engineering & Problem Solving
- ✓ Technical Documentation & Presentation

PROGRAMME DETAILS

Level: Intermediate to Advanced

Duration: 12 Months

Schedule: 2 Sessions per Week · 60 min

Format: Personalized · Project-Based

Tools: Arduino/ESP, Raspberry Pi, Sensors, Camera, Motors, 3D Printing

Includes: Four Phase Projects + Final AI Robot + Student Portfolio

START NOW

START YOUR ROBOTICS & AI
JOURNEY

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BUILD REAL PROJECTS · LEARN BY DOING · THINK LIKE AN ENGINEER

BUILD TODAY. INNOVATE
TOMORROW.