Artificial Intelligence And Robotics

PROFESSIONAL CERTIFICATE

UTM
UNIVERSITI TEKNOLOGI MALAYSIA

CRUX
INSTITUTE

Powering Tomorrow, Today.

Course Synopsis

This module introduces AI fundamentals, covering key technologies, industry applications, and ethical considerations.

Participants will explore how AI simulates human cognitive functions, progressing from theoretical concepts to hands-on applications like speech and face recognition.

The course emphasizes real-world use cases, enabling learners to understand AI's transformative role across industries while gaining practical skills to implement AI-driven solutions.

Learning Outcome

By the end of this module, participants will be able to:

1. Define AI and its core components.
2. Explain key AI technologies such as machine learning and deep learning.
3. Identify AI applications across industries.
4. Demonstrate AI functions like speech and face recognition.
5. Apply AI techniques in practical scenarios.
6. Evaluate ethical considerations in AI implementation.

Course Topics

- Python Programming Fundamentals
- Artificial Intelligence Basics
- Machine Learning & Deep Learning
- Computer Vision with OpenCV
- OpenVINO Optimization & Applications
- AI-driven Applications & Integration
- Introduction to Robotics
- Robotic Arm & Programming
- Multithreading & Data Processing
- Hands-on Project & AI Integration