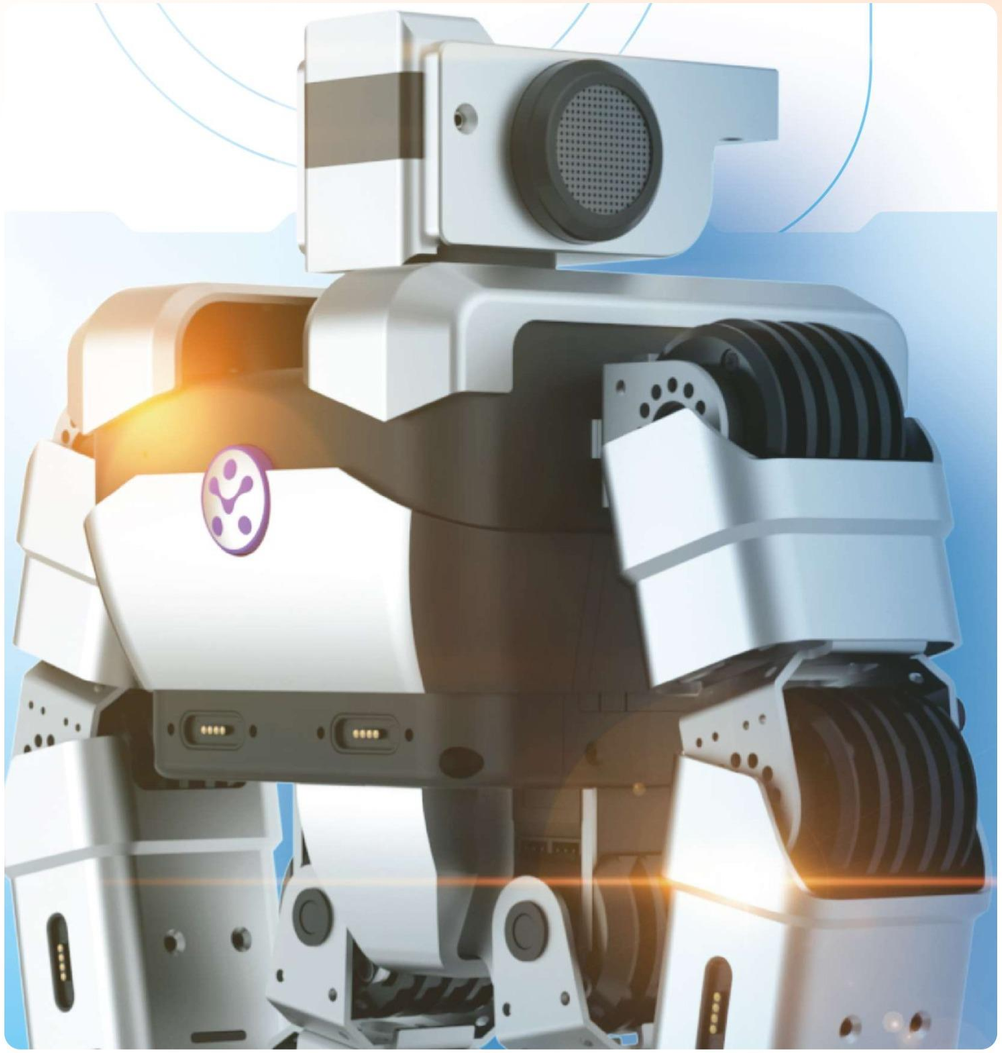
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جيت ان تكنولوجي

UBTECH EDUCATION · PRODUCT PRESENTATION

Yanshee Education Solution

Open source humanoid robot for AI education, built for high schools, vocational schools and colleges.



Yanshee Contents

01 **Solution Overview**
Hardware, curriculum and services in one package

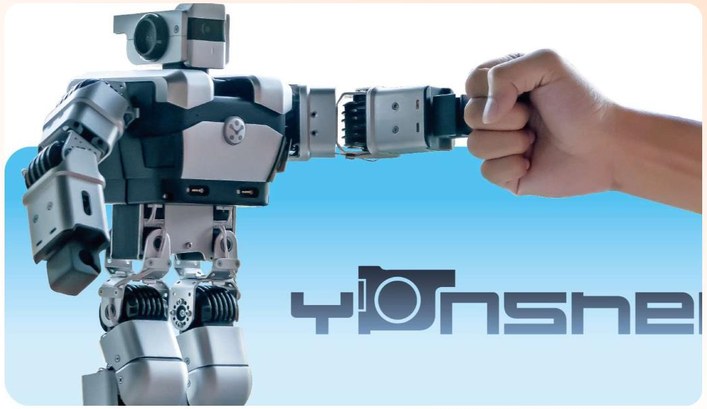
02 **The Robot**
Platform, specifications and core capabilities

03 **Software & Programming Tools**
uCode, uPython, Yanshee APP, API and open source

04 **Curriculum System**
Three courses from high school to college

05 **Comprehensive Services**
Robot as a Service (RaaS) for AI education

Yanshee Solution Overview



Designed for high schools, vocational schools and colleges, the solution covers hardware, software, curriculum, assessment and evaluation systems, and competitions. It builds student proficiency in robotics motion control, AI and programming.

01

Open Source Humanoid Robot

- Open Source Platform
- Advanced Motion Control
- High-performance Machine Vision
- Interactive Intelligent Speech

02

Curriculum System

- Regular Courses
- Club Courses
- Competition Courses

03

Comprehensive Services

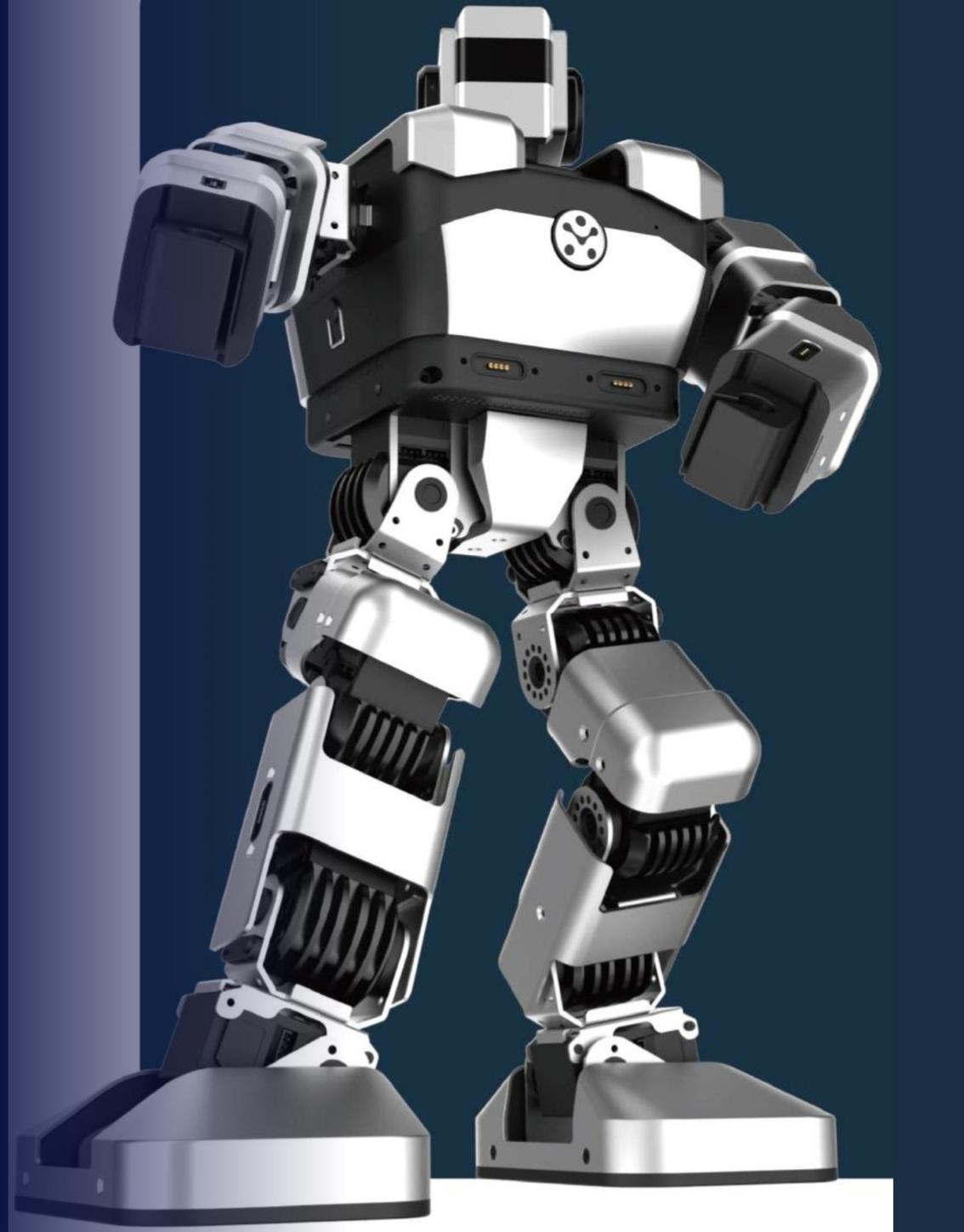
- Consultation Service
- Training Services
- Teaching Support
- Academic Research Support

02

Yanshee

The Robot

- Hardware platform
- Key specifications
- Core capabilities



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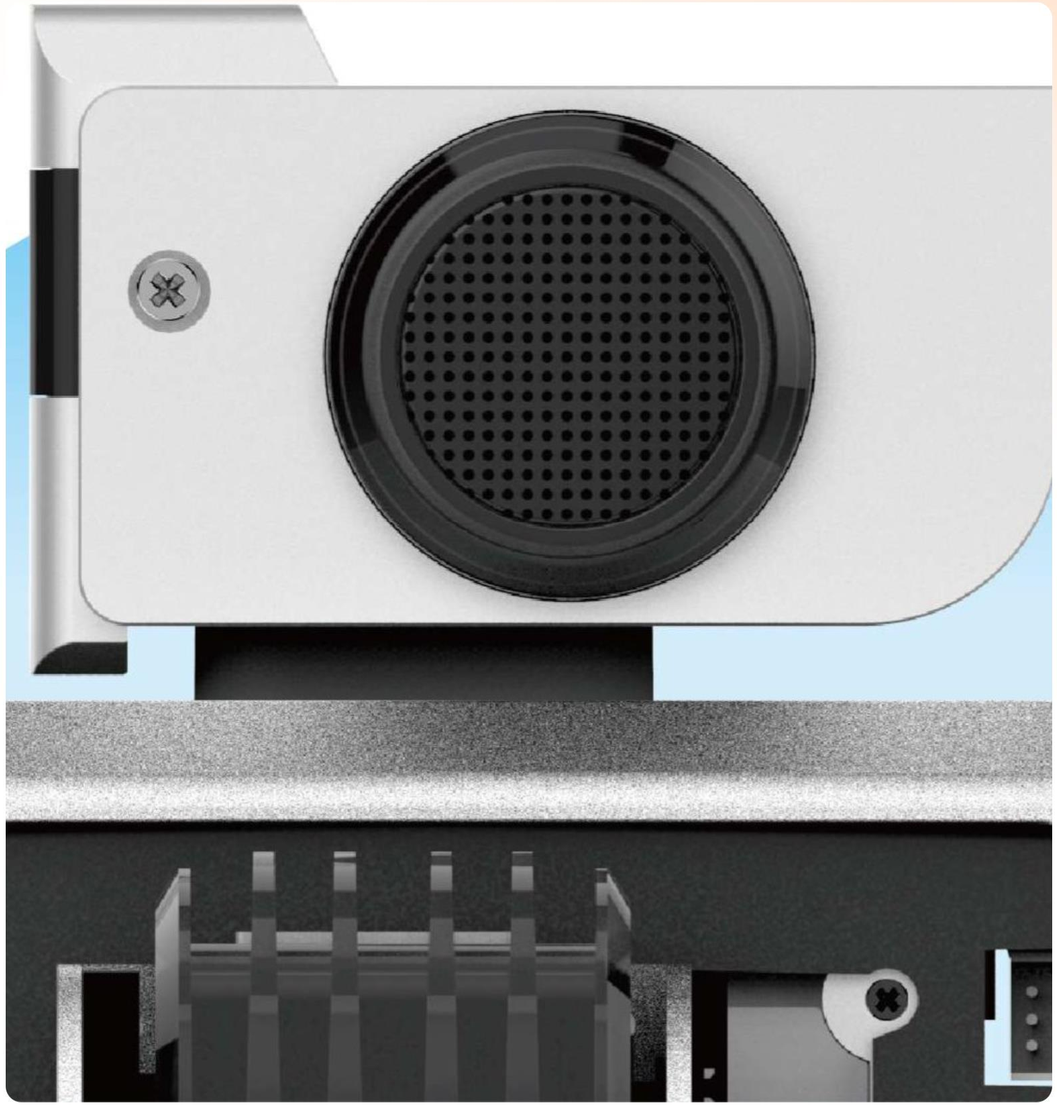
Yanshee Hardware Platform

Open Source Humanoid Robot for AI Education

Yanshee runs on the Raspberry Pi + STM32 open hardware architecture, with a 17 degrees of freedom anthropomorphic design, an integrated 8-megapixel camera, a gyroscope and multiple communication modules. It supports open-source sensor packages and ships with professional open-source learning software.

SUPPORTED LANGUAGES

- Blockly
- Python
- PHP
- Java
- Curl
- C/C++



Yanshee in Numbers

17	8MP	37.0cm	2.09kg
Degrees of freedom	High-definition camera	Height (37.0cm × 5cm)	Weight

Raspberry Pi + STM32 open hardware architecture

Yanshee Open Source Platform

The Raspberry Pi + STM32 structure and modular design make it easy to integrate external devices. The API interface lets users tailor scene design to their own needs.



3B
Raspberry Pi

9-axis
Gyroscope

1 × 40 PIN
GPIO interface

6 × 4PIN
Magnetic suction POGO interfaces

Yanshee Core Capabilities



Advanced Motion Control

17 degrees of freedom on self-developed servos for flexible movement, push-ups and dance performances.



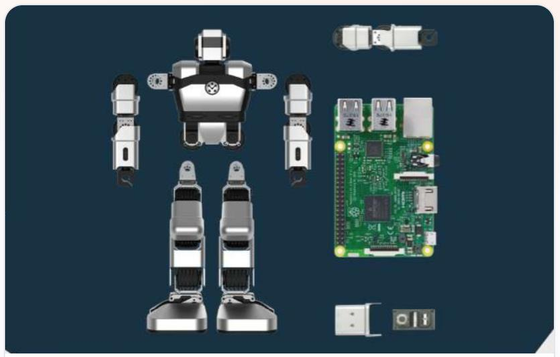
High-performance Machine Vision

8MP camera for photos and video streams. Offline face, object, gesture and color recognition.



Intelligent Speech

Stereo speaker, noise-reducing microphone, dialogue chat and voice commands. TTS, ASR and NLP models.



All-metal Body, Detachable Structure

An aluminum frame reinforces the body; a detachable structure makes assembly easier.

03

Yanshee

Software & Tools

- uCode and uPython
- Yanshee APP
- Yanshee API and open source software



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Yanshee uCode & uPython



uCode

WINDOWS · AGES 8–14

Block-based programming software by UBTECH. Students drag building blocks instead of typing to create games and cartoons, program UBTECH hardware, and combine software and hardware programming.

- Graphical Programming
- AI Hardware Open Platform
- Burning Mode for Advanced Programming

uPython

WINDOWS · MIDDLE & HIGH SCHOOL

A Python coding tool with bootstrap templates, GUI visual programming, interactive debugging in Jupyter notebooks, Python library management and hardware device programming.

- Python Programming
- Code Completion
- Software and Hardware Interaction
- Visual Library Management

Yanshee APP, API & Open Source



Yanshee APP

ANDROID · IOS

Connect and control Yanshee from mobile through a graphical interface, with real-time sensor data and an introduction to the Yanshee developer platform.

- Motion Control
- Centralized Control
- Blockly Programming
- PRP · Pose-Record-Play
- Sensor
- AI Module

Yanshee API

YanAPI is an open-source Python API for secondary development. A few lines of code customize your own AI robot.

Open Source Software

Runs on Linux with third-party open source tools.

- JupyterLab
- ROS SDK
- RESTful API

04

Yanshee

Curriculum System

- Courses at a glance
- Course details
- Teaching framework



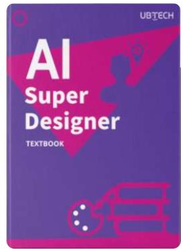
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Yanshee Courses at a Glance

Aligned with CSTA, AI4K12 and the UBTECH Artificial Intelligence Knowledge Mapping. Covering K-12 to college.

COURSE	AI Super Designer	Application and Exploration of AI	Application and Training of Humanoid Robot
Class hours	30	30	30
Recommended grades	Grade 10–11 / High school	Grade 11–12 / High school	Vocational school / College
Programming language	Python	Python	C, C++, C#, PHP, Java, Curl, Python
AI capabilities	Primary application of AI	Comprehensive application of AI	Comprehensive application of AI
Learning tools	Yanshee API, Yanshee Robot + Sensor Kit	Yanshee API, Yanshee Robot	Yanshee API, Yanshee Robot
Interdisciplinary	Maths, Science, Physics, IT		

Yanshee Course Details



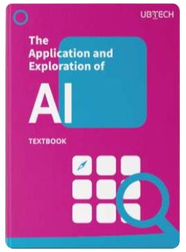
GRADE 10–11

AI Super Designer

14 topics · 30 class hours

Python algorithms through everyday cases: grammar, sorting, recursion, binary trees and greedy algorithms.

Face Recognition · Speech Synthesis · Machine Learning · Sensing · HMI · Technology and Algorithm



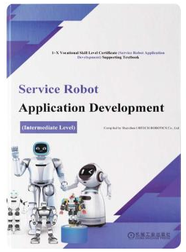
GRADE 11–12

Application and Exploration of AI

12 topics · 30 class hours

AI applications across industries, study fields of AI, machine learning and neural networks, and AI's role in society.

Neural Network · Machine Learning · Sensing · HMI · Technology and Algorithm · Social Responsibility



VOCATIONAL / COLLEGE

Service Robot Application Development

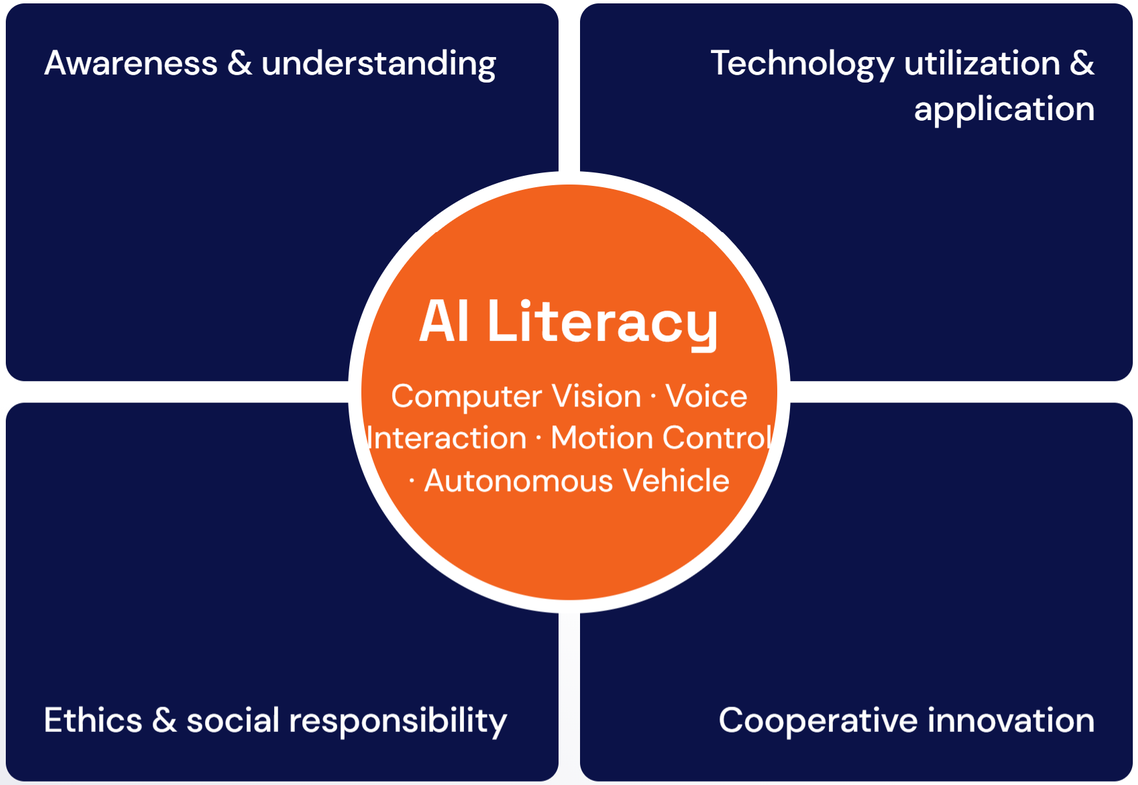
15 topics · 30 class hours

Humanoid robot perception, motion, sensors, machine vision and speech, learned through experiments.

Technology and Algorithm · Machine Learning · Motion Control · Intelligent Speech · Machine Vision · Sensing

Yanshee Teaching Framework

UBTECH AI Knowledge Mapping



5E Model

Large units and PBL projects, guided by the 5E model for teaching and learning practice.

- 01 Engage
- 02 Explore
- 03 Explain
- 04 Elaborate
- 05 Evaluate

05

Yanshee

Comprehensive Services

- Robot as a Service (RaaS)
- Service, product and platform systems



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Yanshee Robot as a Service

A multi-scenario AI education RaaS based on AI and robot technology. Founded in 2012, UBTECH builds on its self-developed full-stack humanoid robot technology to deliver courses and complete AI education ecosystems.



01 Innovation Talents Training



02 Industrial Application Talents Training



03 General AI & Scientific Literacy Improvement

Yanshee Service & Platform Systems

Service System

- Consultation Service
- Training Services
- Teaching Support
- Academic Research Support
- Industrial Training
- Career Guidance
- Event Service
- Achievement Exhibition
- Assessment & Certification
- Professional Construction
- Job Skills Certification

Products & Content System

AI HARDWARE

Assembled Robot · Universal Mimicry Robot · Humanoid Robot

SOFTWARE

uCode | uPython | Crealand

CONTENT

AI education textbook series

Platform Support System

TECHNOLOGY PLATFORM

- AI Education Platform
- OMO Operation Management Platform

ECOLOGICAL RESOURCES

- Society / Association
- Experts and Scholars
- Research Institutions
- Enterprise Partnership



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