



RoboX

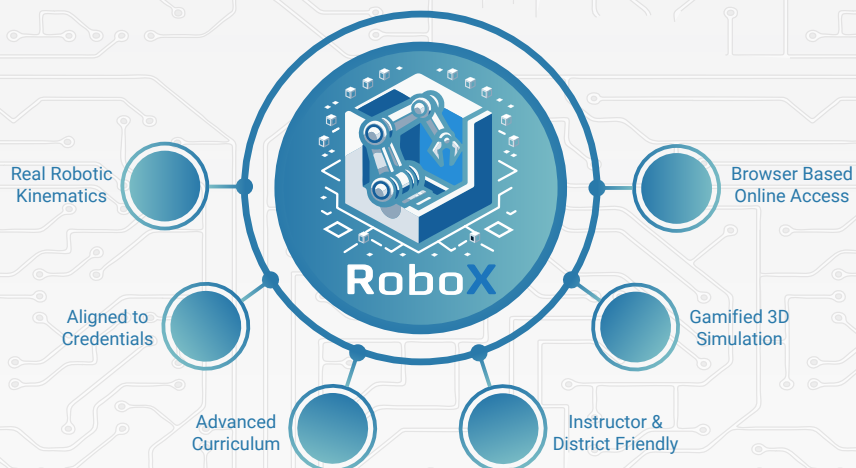
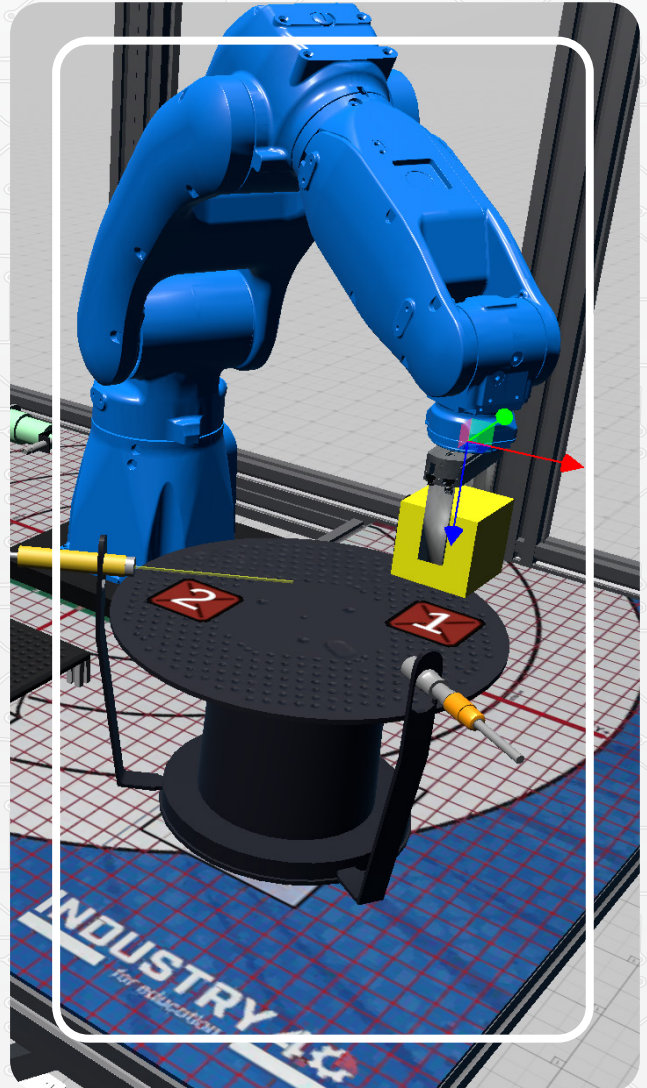
Virtual Industrial Robotics for CTE

RoboX is an innovative, gamified education platform for Career Tech Education in industrial robotics.

RoboX simulation and curricula enables educators and students to experience and learn how real robots operate and are programmed. The RoboX application is scalable and scaffolded for students of all levels of experience. The web-based, online environment can be accessed in the classroom, in the lab or from home.

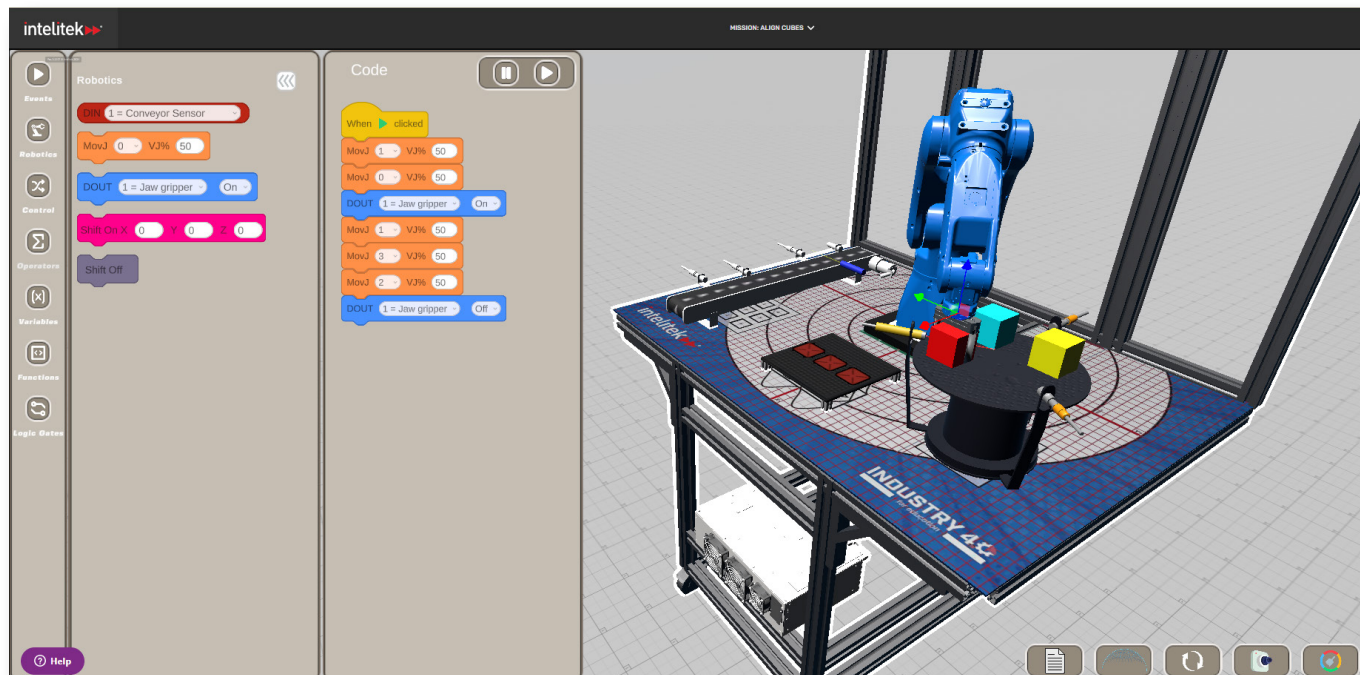
RoboX is an advanced and intuitive platform for programming and operating robotic workcells designed to equip students with practical skills for future careers in robotics and advanced industry. The application includes realistic simulation and control of robotic arms and peripherals, providing a thorough learning experience.

RoboX can be paired in a lab with real robots or used standalone to advance CTE classes to a broad audience.



What is RoboX?

- RoboX is an innovative, gamified education platform for Career Tech Education in industrial robotics
- RoboX is a learning platform with simulation, curriculum, class management, and more
- RoboX is easy to use and fun for students with value for students, teachers, and administrators



Superior Pedagogic Solution

RoboX was created by educators for educators to make teaching robotics easier.

Robust Teacher Support

Not all educators are robotics experts and RoboX is designed to help build instructor knowledge and competencies with an important focus on teacher resources including:

- Structured missions and flexible pacing to fit classroom schedules and student experience levels
- Teacher dashboards and heatmaps
- Detailed student progress and performance reports enable targeted assistance and tailored lesson plans
- Access to student work online, course outlines, lesson plans, and sample program solutions
- Mission competition validated to confirm task completion
- Quizzes, evaluations, grading, and assessment tools to track and evaluate student performance
- Instructional videos and professional development

Built for Admins and School Districts

- District, school, instructor, and student level reporting
- Designed to be inclusive and accessible for all students
- IT friendly - No installation required
 - Accessible from any device with internet access
 - Compatible with Chromebooks and other devices
- Comprehensive class management including integration with rostering
- Academically aligned with assessments, quizzes, and evaluations
- Student progress tracking, heatmaps, and grade tracking for teachers and administrators
- Compliant with COPPA, FERPA privacy and IT requirements

Smart Robotics Training Program for STEM to CTE

Created with Curriculum

RoboX is integrated with student-paced or instructor led curriculum where the concepts of robotics, robot operation, and robot programming are taught. Aligned with Industrial Robotic Certifications, the curriculum elevate students to be proficient with the skills needed to work in industry

FUNDAMENTALS OF ROBOTICS WITH ROBOX

Fundamentals of Robotics curriculum features RoboX simulation and provides students with a opportunity to gain experience and skill in robotic operations and programming through the advanced robotic simulation.

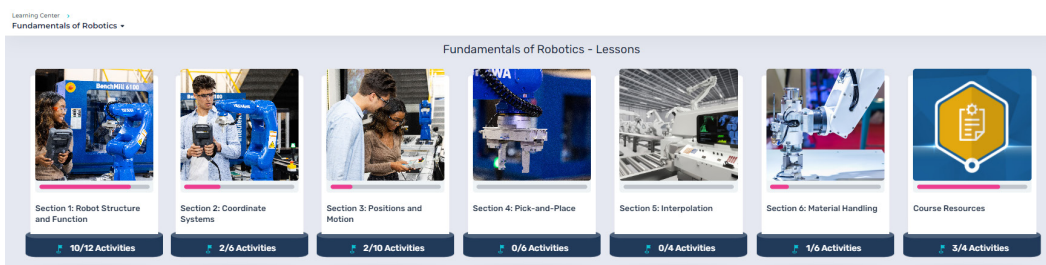
This module gives students the fundamental skills needed to operate, maintain, program and test robotic systems. Students learn how to perform skills such as manipulating the robotic arm, creating basic motion programs, resolving errors, and defining coordinate systems.

ADVANCED ROBOTIC PROGRAMMING WITH ROBOX

Building on Fundamentals of Robotics, Advanced Robotics explores advanced robotic programming. Using RoboX simulation, students gain a greater understanding of robotic concepts, programming, and capabilities, including how to develop and write robot programs for manipulating objects and other automated tasks.

The progressively more complex missions challenge students to design solutions for industrial applications with emphasis on real industrial concerns and program efficiency.

Aligned with Certification framework:



Robotics Operator | Robotics Programmer

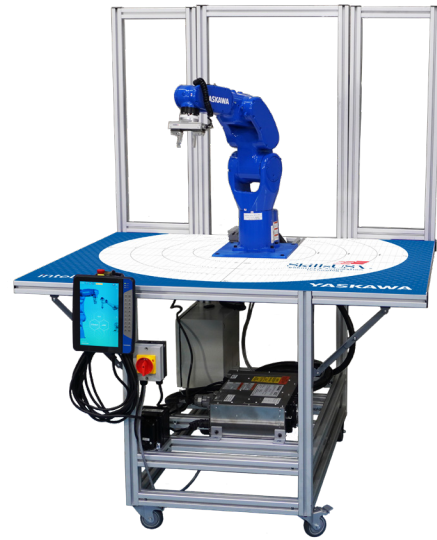


Partnering with leading certification bodies like NIMS as well as industry leading robotics suppliers like Yaskawa to deliver industry recognized certifications ensures students have portable credentials desired by industry to advance their careers.

RoboX for Education

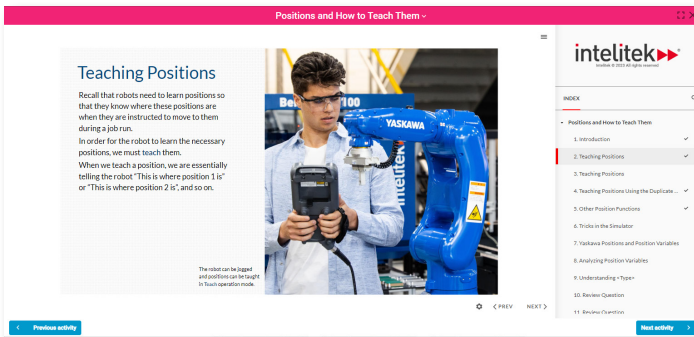
Developing Career Exploration and Training:

- Designed for high school and post-secondary CTE programs to explore careers in robotics and industry
- Provides hands-on robotic experience with programming and simulation.
- Supports training for employment with industry-standard tools and techniques
- Opens opportunities for career advancement in Industry 4.0
- Education Platform with integrated curriculum and labs



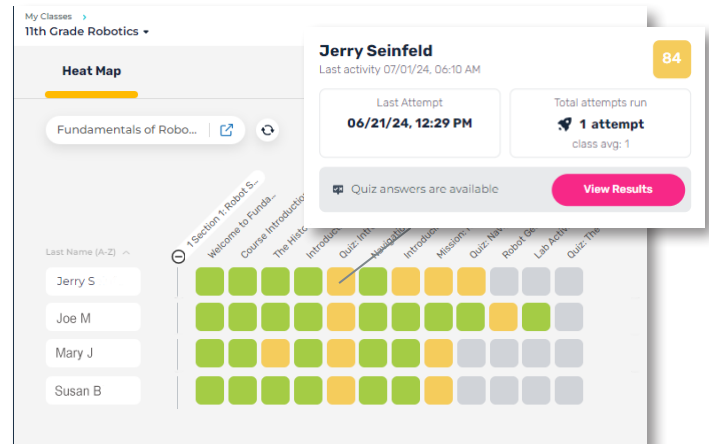
Engaging Game-Based Learning

- Gamified missions to make learning robotics and programming fun and interactive
- Realistic robot kinematics provide real-world experience
- Integrated with lessons, theory, evaluations and missions
- Dynamic 3D simulation:
 - Intuitive interface designed for novice and advanced users
 - Replica of the dimensions and functions of robot equipment
 - Simulation of robot and gripper part manipulation
 - Collision detection for safe and precise operations
 - 3D visualization of the robot's work envelope
 - Simulated peripheral devices like conveyors and rotary tables



State of the Art Kinematic Simulation

- Robot Control
 - Interactive graphic interface to move robot with ease
 - Manual and automated movement of robot
 - Joint or Cartesian coordinates with Intuitive lead-by-nose
 - Record positions for robot arms with go-to-position button for quick navigation
- Intuitive Robot Programming
 - Blocky-based drag-and-drop programming
 - Program robot sequences, interaction with peripherals, and program logic
 - Execute in simulation or twinned with physical robot *
 - Supports Inform-II based coding blocks for advanced Yaskawa programming capabilities *



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Related Products:

- Hardware: Compatible with Yaskawa robotic arms and peripherals for comprehensive simulation and control

* Feature planned for 2025

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