

CRITICAL
INDUSTRIAL
TECHNOLOGIES

NEATCO ENGINEERING SERVICES INC.



Neatco Engineering Services Inc. is a forward-thinking engineering firm dedicated to advancing automation and machine vision technologies. We deliver cutting-edge solutions and services through a collaborative and innovative approach, addressing the unique challenges of industries worldwide. Our expertise lies in harnessing the power of AI and robotics to transform advanced manufacturing processes, driving efficiency and competitiveness for our clients.

EXPERTISE

AI IN ENTERPRISE RESOURCE PLANNING (ERP)

Inventory Management System: AI algorithms will analyze inventory data and consumption trends to improve production efficiency.

Customer Relation Management (CRM): AI-powered chatbots will assist and handle customer inquiries, providing quick and accurate responses while reducing the customer representatives workload.

Predictive Maintenance: AI will predict when IIoT enabled equipment or machinery will likely fail, allowing for timely maintenance and reducing downtime.



AI VISION INSPECTION, PROCESS CONTROL, AND MATERIAL SORTING

Object Detection: AI algorithms will detect, classify and segment objects for record keeping, further analysis and sorting, using variety of sensory information.

Quality Control (QC): AI will perform quality control analysis to ensure that parts are to the highest manufacturing standards (e.g. size tolerance, surface finish, location/orientation etc.).

Operating Equipment Efficiency (OEE): AI will provide feedback in real time to optimize mechanical machinery workflow and processes.



IIOT & DIGITAL TWIN FOR MANUFACTURING

Interconnectivity: Create communication pipelines to existing systems for data acquisition and sharing over a local or cloud network.

Optimization: Simulate designs and analyze products prior to or congruently with the physical activities in production to gain insight for system operation improvement.

Digitization: Gain the capability to collect, manage, and share KPIs for data driven operations.

Visualization: Connect operators to process big-data in a desirable format.



OPEN ROBOTICS

Reduced Complexity: Single central controller for speed or position control, operation of any robotic arms, or other automation needed for advanced manufacturing.

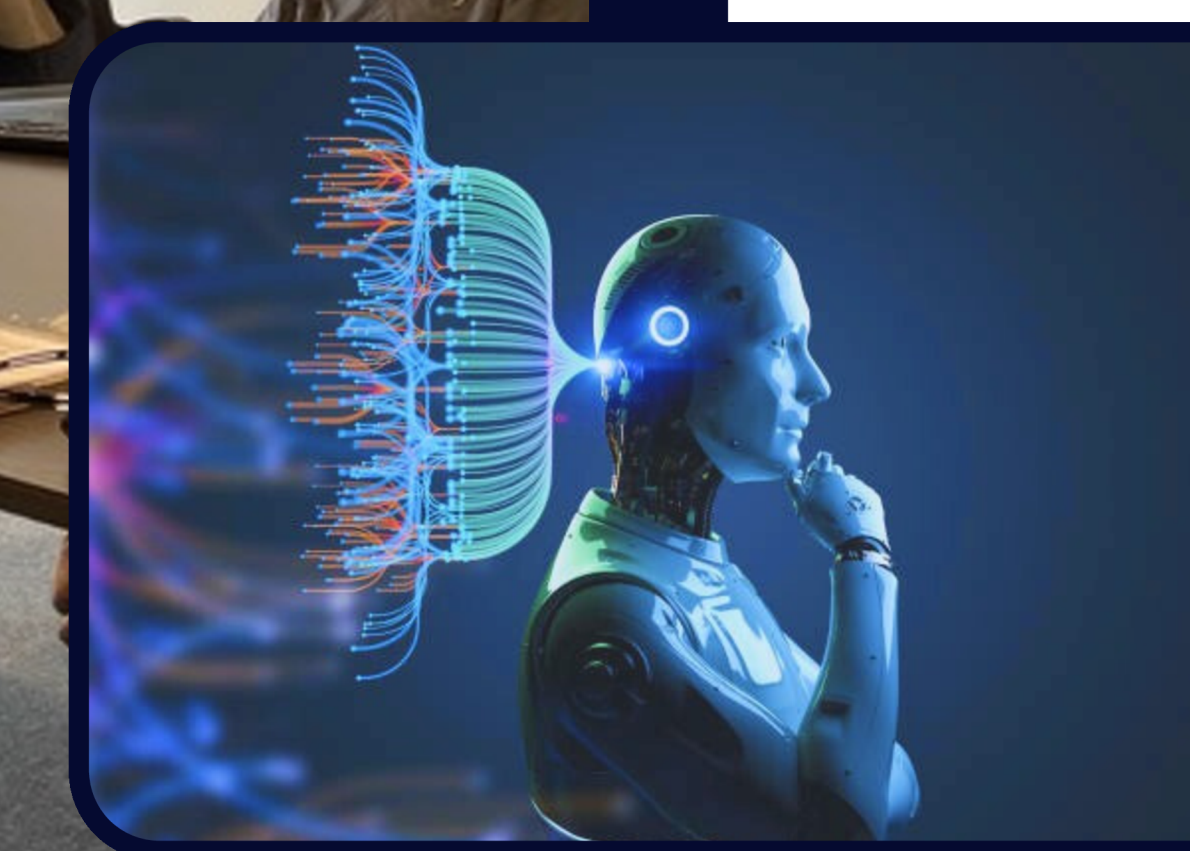
Scalability/Modularity: Plug & Play system expansion by using standardized building blocks.

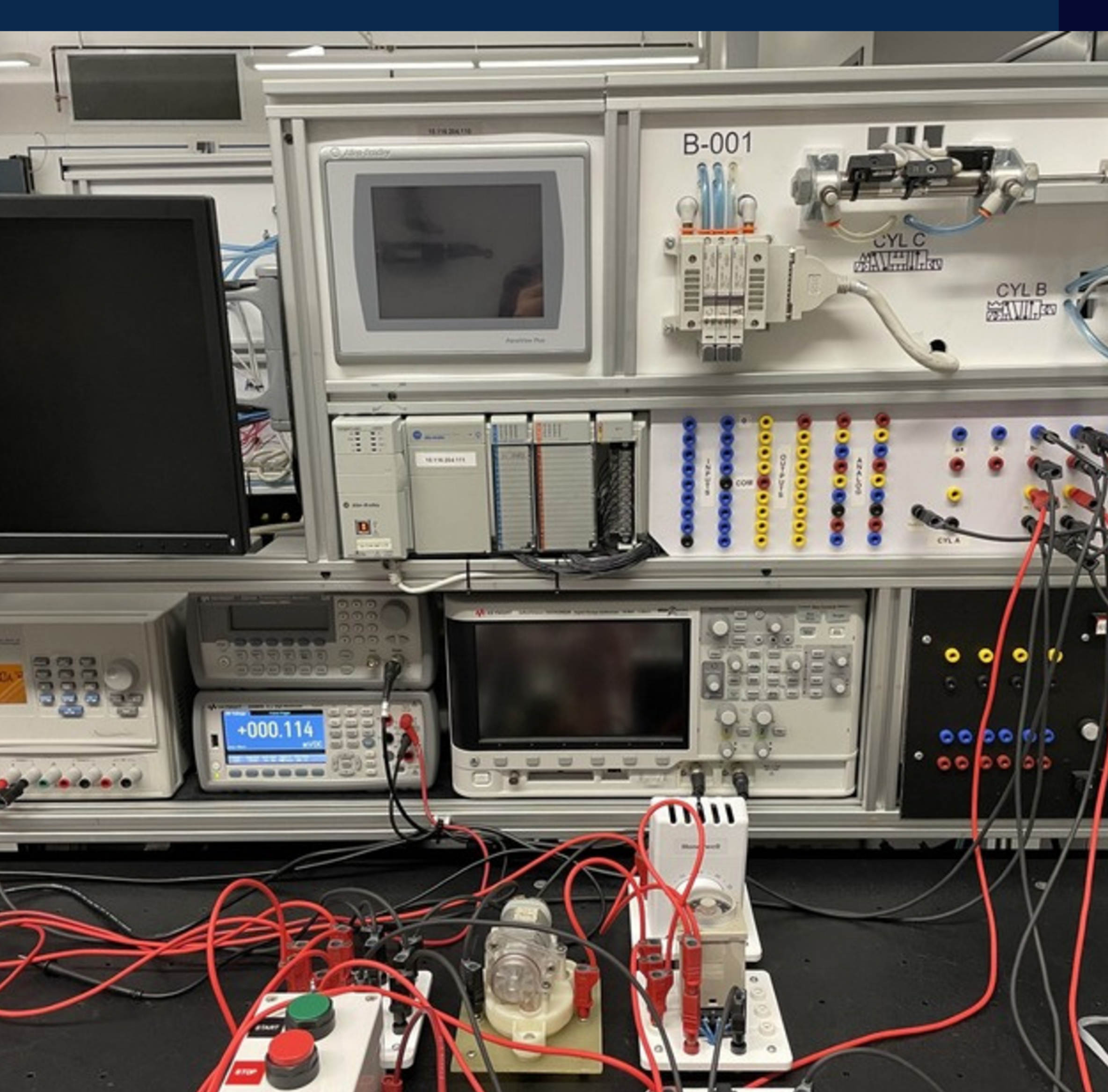
Cost Effectiveness: Cost saving by sharing hardware and software across the same system architecture.



ADVANCED MANUFACTURING MICRO-CREDENTIAL TRAINING DESIGN AND DELIVERY EXPERIENCE - HUMBER COLLEGE

- Mechatronics
- Programmable Logic Controller (PLC)
- Electric Motors
- Pneumatics and Hydraulics
- Robotics
- Lean Manufacturing
- IIoT
- Emulate 3D Simulation

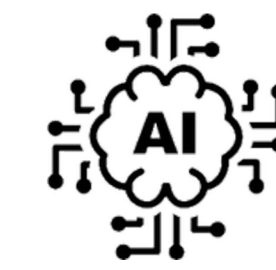




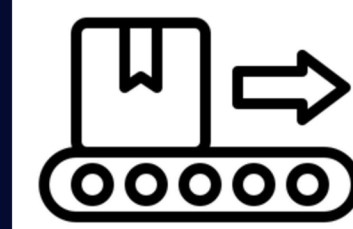
TRAINING COURSES FOR AI & ROBOTICS



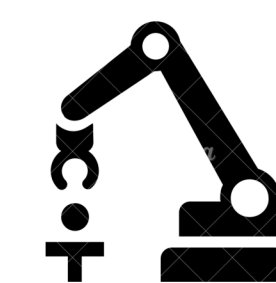
AI Vision: Training on developing custom vision neural networks for advanced image recognition, object detection, classification, tracking, counting, sorting, and quality control in industrial applications.



AI in ERP: Training on integrating Large Language Models (LLMs) to automate CRM, inventory management, and other enterprise resource planning systems.



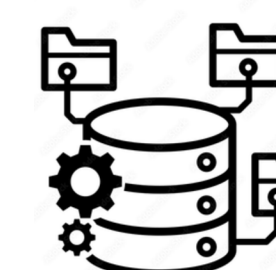
AI Obstacle & Collision Avoidance: Comprehensive training on AI-powered systems for real-time obstacle detection and collision prevention in autonomous machines.



Robotics: Training on robot selection, safety protocols, tool design, integration, programming, autonomous and collaborative robotics, and AI vision integration.



Simulation/Digital Twin: Training on creating digital twins and simulations to model and mitigate risks in complex engineering projects.



IIoT: Training on implementing sensors, actuators, and IIoT systems for enhancing connectivity and automation in robots and industrial equipment.



Data Management: Training on techniques for process data collection, analysis, and visualization to manage and utilize big data effectively in industrial contexts.

DELIVERY TYPE

In-person delivery at customer or Neatco's premises using generic customer equipment, online delivery, board room training/presentation, hybrid (remote theory, in person activities).

INDUSTRIAL APPLICATIONS



Advanced Manufacturing/
Construction

Material Handling
Process/Quality Control
Vision Inspection
Simulations
Robotic Loading/Sorting



Mining/ Agri-Food

Material Sorting/Handling
Material Composition
Quality Detection
Equipment Safety Monitoring
Obstacle & Collision Avoidance
Object Classification



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