Industrial Robotics Script:

Hi, welcome to our Dual Robot Bottle Sorter

First let us demonstrate the robots in action.

Our system utilises the Widow X250, a 6DOF robot extensive uses in the home, office and industrial environment.

Along with this Widow, we also have the highly maneuverable UR3e with 6 DOF and adaptable end effector.

Our robots can be used in an outdoor environment with the capacity to be manipulated in various configurations. For the Widow X250, two sliding finger Grippers are used, with the UR3e utilising a two-finger grasping gripper.

Here in our system, we utilise a variety of safety features ranging from a standing fire extinguisher for any fires that could occur from electronics and a warning sign to keep users or operators visually aware of the robots in action.

light curtains are used to monitor movement that enters the area and most importantly, an E-stop is implemented onto the table outside the working are to disable the two robot’s mid operation.

Here we can show the collision detection in action with the movement of the Widow X250. This aims to avoid the table leg by finding the most efficient trajectory.

Here we demonstrate the light curtain in action with a cup simulated being thrown to the working environment of the robot. Once the cup enters the vicinity of the placed curtains, a visual barrier appears to indicate this and will stop the operation of the robots.

Along with our system, we utilise a interaction and simple Graphical User Interface (GUI) to manipulate the individual joints of each robot. Here we start with the Widow X250 joint and then also with the UR3e. In addition, XYZ cartesian movement can also be applied as seen.

Here we also have the real UR3 robot demonstrating the same movement for the pick and place of the cup.

Thanks for watching and please support our Dual Robot bottle sorter.