

Vision-to-motion

Across these exercises, the user is expected to learn the full practical workflow of using a fixed camera together with a robot in a shared workcell: how to connect to the robot and safely command motion (including strategies, TCP setup, compliance/teaching mode, and error recovery), how to visualize and sanity-check coordinate frames and poses, how to perform their own eye-to-hand camera extrinsic calibration using a ChArUco target so the camera is correctly positioned in the same world frame as the robot, and finally how to turn visual inputs into actionable robot commands by selecting features in the image, converting pixels (optionally with depth) into 3D world/robot coordinates, and executing a controlled robot motion from one visually selected point to another—demonstrating a complete vision-to-motion pipeline where camera measurements reliably become robot positions.