AKGEC-KUKA
INDUSTRIAL ROBOTICS TRAINING CENTRE

Robotic Vision Application

Vision Guided robots require an integrated vision system in order to perform the complexity of the camera system depends on specific project requirements. Vision Guided robots are technically advanced and can offer a cost cutting solution to traditional manufacturing options. Robotics as a young field of modern science combines a variety of its traditional branches. The opportunities arising from the use of robots have consolidated robot's position as a necessary equipment around us. One of the fundamental concerns of robotics is the concept of robot's manipulator – a mechanical arm designed to replace and augment selected human motorial functions. Therefore, industrial robots and manipulators are widely used for robotic manufacturing processes such as welding, painting, moulding, handling press, assembly etc., concentrating on those that require heavy lifting capabilities or are hazardous to human health. In this project Vision Camera is used to identify the position and orientation of an object present on conveyor belt and communicate with AGILUS Robot (KR 6) for pick the object from the conveyer and placed it an appropriate place. The project focuses on machine vision hardware and software included in vision systems, such as those found in smart cameras and compact vision systems. The improvement in this area is a major driving factor for the overall growth of machine vision market. The project also focuses on the fast-growing component markets including cameras, optics, and vision software. The combination of robotics and image processing enables in many areas the fault free, fast, reliable and economic manufacture and quality assurance of all kinds of products.