

Design of a pneumatic control system for a robot arm that picks and classifies products by height using Automation Studio software.

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Abstract: This topic focuses on designing a control system for a robotic arm to perform the task of picking and sorting products based on height. The reason for choosing this topic is determined by the practical needs in production, where automating the sorting process helps improve efficiency and reduce errors. The objective of the research is to build an intelligent control system that can adapt to various types of products and different positions on the same tray. The approach includes a combination of robot control theory and experimentation to develop a suitable Automation Studio software program. The expected outcome of this research is to provide an application solution that can be integrated into the production process, while also contributing to the development of automation technology in the manufacturing industry.

Keywords: Robotics, Automation Studio, Pick and place product sorting, Robot control, Automation industry