

Design and control of a four-degree-of-freedom robotic arm using ESP32 and Smartphone

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Abstract: In industrial practice, enhancing the accuracy and flexibility of automation systems is an urgent requirement. This topic focuses on the design and control of a four-degree-of-freedom robotic arm using ESP32 and Smartphone to improve performance in industrial applications. The main objective is to build a control system based on a combination of computer theory and experimentation, while developing an accessible user interface via Smartphone. Through this research, the topic aims to provide a flexible and efficient solution for controlling free robots, contributing to the development of modern automation technology.

Keywords: Robotic arm, ESP32, Robot control, Smartphone, Industrial automation