Project 1:
Action Recognition Based Human Action Monitoring Under Industry 4.0
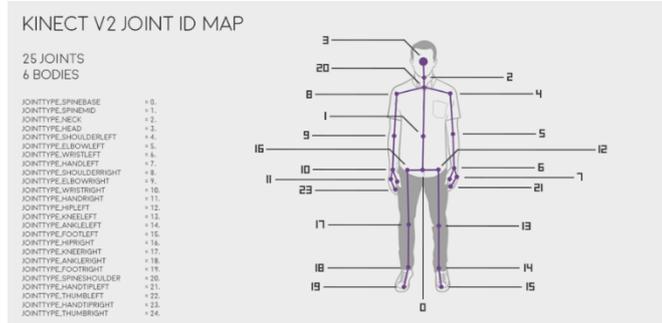
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Project Description and Objectives

With the introduction of intelligent manufacturing and smart workshops, the industry has begun a comprehensive innovation to improve its core competitiveness. At present, human beings cannot be completely excluded from the modern industrial production and they are an important influencing factor of efficiency and quality. In this project, a human action monitoring system will be established based on knowledge in machine vision and industrial engineering. First, choosing a reliable vision sensor and establishing a data acquisition and processing system are essential. Then, according to the real assembly line, establish assembly line basic actions library to fill in the blank of the worldwide action library. Third, establish the action recognition model with CNN or other selectable method. Finally, based on the action classification model, an operator assembly action monitoring system need to establish with the function of action recognition in real time and wrong actions responding. Ultimately, a human recognition monitoring and wrong actions responding system will be established to improve production efficiency and quality fundamentally.

Eligibility Requirements

Interested students should have basic knowledge of coding, such as Matlab, python and so on and interest in machine vision.

Main Tasks：

Finish one research report.
Give one technical presentation.

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