Master Thesis, Forschungsarbeit

Gesture Recognition and Automatic Assembly Validation in Quality Control using Smart Gloves

In a quality control system, smart gloves are utilized to validate assembled parts in a production line in real time. Smart gloves (see figure) include a variety of sensors for acoustic, force, proximity, orientation, … etc. Such a wearable collects and records signals in real time in order to monitor and validate the assembly of smart connectors in a production line. An embedded system (usually a microcontroller) should alert the worker whenever a flawed assembly is detected.

Your tasks:

- Develop and implement a classification system for detection of flawed parts during the assembly process, starting from an existing deep learning (convolutional neural network).
- Reduce the developed model for deployment on an embedded system.

Duration: 3-6 months

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