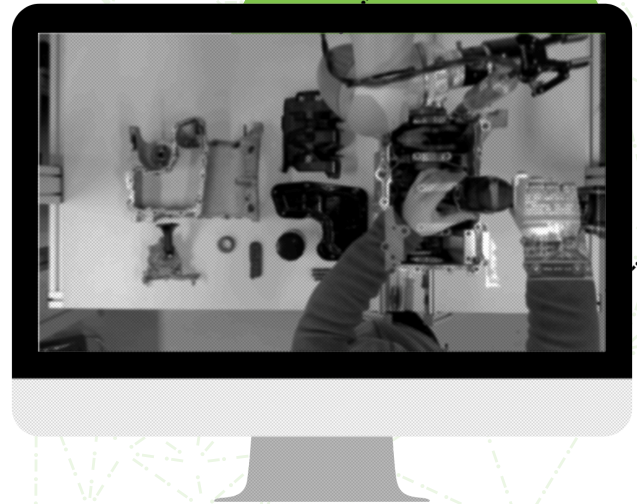


NAME

Augmented reality system for teaching assembly operations and human-robot cooperation



CHALLENGE

- The assembly of complex products composed of flexible parts that are difficult to manipulate and need to be placed in hard-to-reach locations requires the dexterity and cognition of a human operator, who can be helped by robotic systems to increase the productivity of the assembly line, leading to the need for intuitive human-machine cooperation systems.
- Traditional teaching with manuals is not very intuitive and requires a long training time, which can be replaced by augmented reality systems that show concise and three-dimensional information throughout the assembly process.

SOLUTION

- The immersive augmented reality system projects 3D information on the assembly station to show the operator the active work zones along with text and video instructions to indicate the operations that are allocated to the operator and to the robot during each assembly step.
- Combining the adaptability and dexterity of a human operator with the repeatability and precision of a robotic platform makes assembly lines more flexible, productive and cost-effective.

APPLICATION

Operator training in car engine assembly; Human-machine cooperation in assembly lines.

TECHNOLOGIES



Advanced
Automation Control
& Industrial Robotics

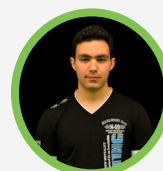
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