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# TEAMING.AI 9<sup>TH</sup> PRESS RELEASE

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## Revolutionizing Working Safety with Skeletons

Industry 4.0 has paved the way for groundbreaking advancements in digital transformation, marking the onset of Industry 5.0. Artificial Intelligence (AI) has been a driving force behind this evolution, profoundly impacting the manufacturing sector. However, concerns regarding the displacement of human workers by AI systems persist, emphasizing the need for a balance between technological innovation and human-centric values.

In response to these challenges, the TEAMING.AI project is developing a revolutionary human-AI teaming software platform. This innovative platform integrates various utilities to foster collaboration between humans and AI systems, ensuring a harmonious and efficient workflow. The project, in collaboration with top European partners from both academia and industry, is focused on implementing and demonstrating innovative concepts in areas such as quality inspection, machine diagnostics, and accident prevention.

Regarding the last point, a major aspect of human-centered systems is ergonomics, which plays a vital role in enhancing worker well-being and overall system performance. Poor ergonomic conditions in the workplace pose significant risks to occupational safety and health. Addressing these concerns, the project focuses on providing digital assistance to human operators to maintain ergonomic standards during their work.

Currently, mainly two approaches for digitalizing human postures are prevailing: either the worker has to wear various sensors on the body, which is uncomfortable, or a camera is used for observation. However, the major drawback when using cameras are GDPR issues regarding the video footage. Workers are concerned about being filmed, but without they cannot get assistance. Teaming.AI breaks that circle by utilizing latest Artificial Intelligence Algorithms to extract Skeleton Poses out of real images and only uses them for ergonomic calculation. So, no images of real people are stored anywhere in the system.

At a Spanish industrial partner, the project has implemented a system equipped with wide-lens cameras covering a shop floor, capable of analyzing multiple persons simultaneously. The system generates ergonomic reports utilized in daily worker shift meetings, empowering human operators to overrule AI judgments and contribute their contextual knowledge.

This approach exemplifies the fusion of privacy protection and technological innovation, demonstrating that privacy and technological advancement can coexist harmoniously. By leveraging the strengths of both AI and human expertise, TEAMING.AI is pioneering a new era of collaborative manufacturing, where human workers and AI systems complement each other seamlessly.



Figure 1: Picture of real scene happening in front of the AI system (face pixelization added manually for publishing).

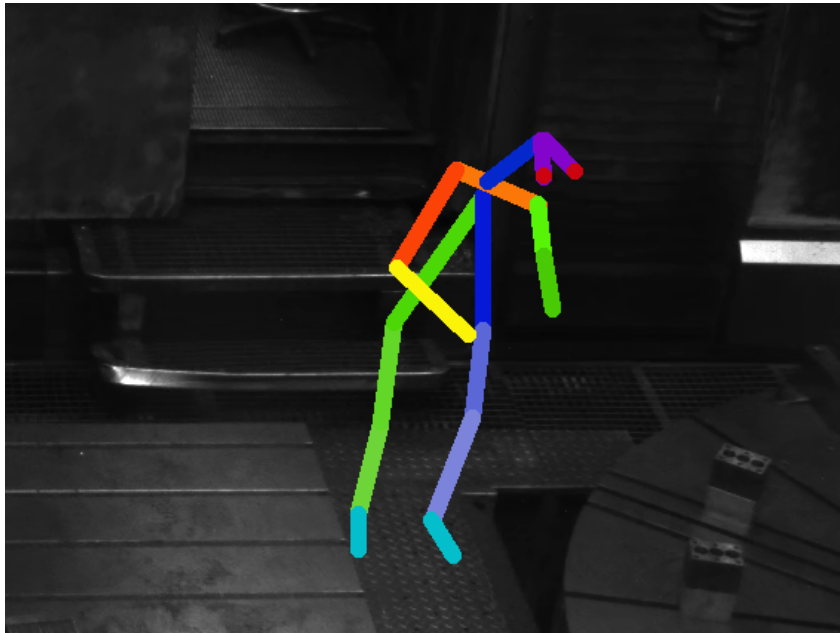


Figure 2: Data of scene as perceived and then processed by the AI system. The AI system only "sees" skeletons instead of full humans.



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