WILL AI REPLACE ME?

Industrial Designer

Manufacturing

The role of an Industrial Designer combines technical aspects, translating precise specifications into graphical representations, and creative aspects, imagining the best way to represent an idea or concept. While some tasks, such as updating existing drawings, can be partially automated with specific software, the initial creative phase requires human judgment, expertise, and artistic sensibility that are challenging to replace with a machine.

Moreover, close collaboration with engineers to understand and interpret technical requirements reinforces the need for a human element in this profession.

Automation degree: 26,67%   Moderate but identified automation impact of AI for this Job
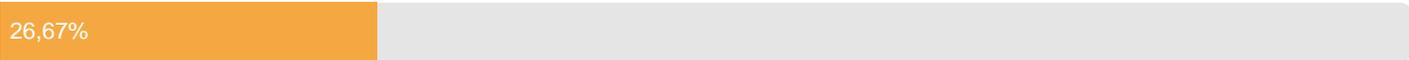
26,67%

Main tasks

This section reviews the 3 main tasks associated with the job studied and assesses the potential level of automation induced by AI (**« AI Automation Impact »**).The modeling uses 8 criteria detailed on the **« Methodology »** page.

Tasks	AI Automation Impact
Create plans and functional diagrams of parts, assemblies, or manufacturing systems.	High
Collaborate with engineers to translate technical specifications into graphic representations.	High
Update and modify existing drawings based on technical or regulatory changes.	High

Impact on skills

At-risk Skills ⬇

Precision in Drawing Sub-assemblies from the Associated Nomenclature	Even though CAD (Computer-Aided Design) will not disappear, AI capabilities may automatically generate nomenclatures based on designs. Automatic component detection and associated list generation are tasks that can be simplified by AI.
Keeping the Definition File Updated	Document management and updating files can also benefit from automation. Intelligent systems may identify modifications, update them automatically in the files, and even alert designers or engineers to potential changes or necessary updates.

Future-proof Skills ⬆

Identifying Dimensional, Functional, and Physical Constraints	While software and tools may change, the ability to understand and identify the real constraints of a project, whether dimensional, functional or physical, remains crucial. This skill requires a deep understanding and intuition of project needs, as well as the ability to foresee how different variables may interact in the real world. These nuances and this level of understanding are hard to fully automate.
Ability to Work Alone or in a Cross-cultural and Multidisciplinary Team	Human coordination, collaboration, and interpersonal communication are skills that, despite technological advancement, will always be crucial. AI can facilitate communication (translation, for example) but cannot replace human interaction, understanding of cultural nuances, and the ability to effectively collaborate across different domains and cultures. This skill encompasses not only the ability to work in a team, but also to navigate in an increasingly globalized and interconnected work environment.

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