



WILL AI REPLACE ME?

Chemist

Manufacturing

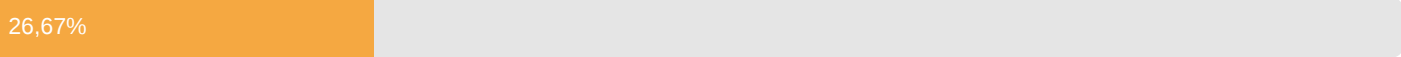
The profession of a chemist is one where technical competence and specialized expertise play a crucial role. AI has the potential to offer significant productivity gains, especially in the design and analysis of experiments, as well as in interpreting results.

AI-based systems can assist in modeling chemical reactions, predicting outcomes, and even identifying new product development opportunities.

However, the role of a chemist extends beyond these technical aspects; it also involves significant responsibilities in terms of safety and environmental compliance, areas where human judgment remains crucial. Therefore, while AI can offer substantial benefits, the role of a chemist will retain distinctly human elements, particularly in making informed decisions and ensuring safety and compliance.

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
Design and conduct chemical experiments and analyses	Moderate
Interpret results to develop new products or improve existing ones	Significant
Ensure safety and compliance with environmental standards in handling	Moderate

Impact on skills

At-risk Skills ↓	
Conducting Routine Chemical Analyses	Automated systems can already perform a large number of routine chemical analyses, notably with the help of spectrometers and other automated instruments. AI could make these systems even more autonomous.
Logging and Reporting of Results	AI can be used to automatically log experiment results and produce preliminary reports based on these results, eliminating some of the manual work.
Future-proof Skills ↑	
Complex Interpretation of Results	Although AI can help identify trends and patterns, the deep interpretation of results – particularly in the context of innovative chemical research – requires nuanced understanding and human expertise. Chemists need to be able to link results to theory, pose hypotheses, and design new experiments.
Ethics, Safety, and Compliance with Standards	The ultimate responsibility to ensure that experiments are conducted ethically and safely falls on humans. Also, understanding environmental implications, managing risks, and making informed decisions are essential and constitute enduring skills.

Visit our website