



CAREER PROFILE

Automation Engineer

Starting Salary Range ^{i,iii}

\$55,000–\$90,000

Education/ Training

- Bachelor's degree in automation, engineering, or a related STEM field
- Internships and/or apprenticeships
- Specialized certifications, when necessary

Who are they? ^{i,ii}

An automation engineer is a person responsible for setting up and improving upon an automated manufacturing process so that it can be as productive and efficient as possible. They design the process, set up the technology that will implement the process, and monitor the process consistently, looking for ways that it can be improved. They are vital members of any manufacturing team, and they can be found in a wide range of industries, including pharmaceutical manufacturing, mining and oil and gas extraction, water and wastewater, and many more. At Stanley Black & Decker, automation engineers ensure that its manufacturing facilities are producing quality products efficiently. If you are detailed, love a good “to-do list,” and excel at finding ways to do things more quickly and effectively, then you might make a great automation engineer.

What do they do? ^{i,ii}

Automation engineers set up the automation of a company's manufacturing process: the process that builds and delivers a company's products. They are responsible for making sure this process runs as quickly as possible, while still delivering products of high quality and that meet all standards and requirements. This requires an advanced understanding of the process and of the instruments that monitor and control all the variables. They provide technical support and also likely train teammates on the design of the process, its operation, and even maintenance. As they monitor production, they may realize that optimizations could be made to improve the process or new technologies could be implemented to help their team meet goals. Automation engineers may also be responsible for making sure that the whole process meets all local, state, and federal regulations. Automation engineers work closely with and may even manage other members of the team responsible for operations, so strong communication skills are also necessary.

How do I become one? ^{i,iii}

Students who want to become automation engineers should commit to taking the appropriate courses and developing the necessary skills starting in high school. Computer science, advanced mathematics, engineering, and computer-aided design (CAD) courses should all

be taken, where available. This career will likely require a bachelor's degree in automation, process control, electrical engineering, mechanical engineering, or a related field. It may also require more specialized certifications in programming and Computer Systems Validation. Internships and co-ops are also excellent ways to prepare students to work in automation engineering.

Job Outlook ^{i,ii}

Automation engineers will have the flexibility to work in many different industries and on many types of products: these include pharmaceutical and medical device manufacturing; chemical and petrochemicals; food and beverage; oil and gas; and biochemical manufacturing. Employment prospects for engineers are strong, and the industry is projected to grow about on-par with the average for all US occupations. The number of opportunities and rate of growth will vary depending on the industry that an automation engineer hopes to work in. Automation engineers will be most competitive and most likely to advance in the career if they stay consistently up-to-date on new software and new technologies.

ⁱ"Stanley Black & Decker Automation Engineer Jobs." Glassdoor. https://www.glassdoor.com/Jobs/Stanley-Black-and-Decker-automation-engineer-Jobs-EI_JE350350.0.24_KO25.44.html

ⁱⁱ"Occupational Outlook Handbook." U.S. Bureau of Labor Statistics. <https://www.bls.gov/ooh/architecture-and-engineering/mechanical-engineers.html>

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