Security Engineer

With our world's dependency on technology and computers, certain "disruptions," such as natural disasters, cybercrimes, or hacking pose a real threat to internet security. **Security engineers** design computer systems that are ready when these "disruptions" happen.

SECURITY ENGINEER [1]

Security engineers are complex problem solvers who predict and solve problems *before* they happen so they can design systems to prevent the problems. They also design the security rules and procedures that companies follow. Security engineers teach employees how to follow the rules so the company's business stays safe and efficient.

Hacker

Someone who tries to get into your computer or device without permission.

Cybercrime

A crime that involves a computer, a network, or the internet.

Encode

Change into a code to keep secret from others.

IS SECURITY ENGINEER A GOOD CAREER FOR ME?

Me	Security Engineer
I have a curious mind. I like to predict and solve big problems.	Security engineers are curious problem solvers.
I love innovation. I get excited about figuring out ways to make something work better.	Security engineers are technology innovators.
I am organized. I like following directions and procedures step-by-step.	Security engineers are organized and methodical.
I am interested in school subjects like technology, math, and science.	Security engineers study computer science, physics, calculus, and statistics.
I enjoy explaining things. I like working with others.	Security engineers are strong communicators. They enjoy working in teams.

[1] https://www.careerexplorer.com/careers/security-engineer/

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How does this career help me?	How does this career help the world?
Every time your family members buy something online, use a phone to do banking, or use a credit card at a store, they benefit from the work of a security engineer. Security engineers make sure your personal information stays safe and that you can access it during disruptions, such as natural disasters.	You might have seen reports of data breeches or cyberattacks at familiar businesses. Security engineers work to protect a company and its customers' data. They try to predict cybercrime *before* it happens.

What are some similar careers?
Security analysts make sure that online business is safe. After a cybercrime occurs, security analysts figure out how much damage has been done. They make suggestions to fix the damage and keep it from happening again.
Cryptologists encode data so that others can't read it. This keeps a company's and its customers' information safe from outsiders.

Here are ways to practice the skills to be a successful **security engineer**:

- Think of something in your life that you want to keep safe and secure. It could be your computer password or even your home. Make a list of steps you currently take to keep that thing safe. Then make a list of ideas to make it even safer.
- Research a recent widespread data breech. Investigate what kind of data was stolen or damaged. Then make some recommendations about how businesses and individuals can protect their information in the future.
- Imagine that a natural disaster, such as a hurricane or tornado, destroyed the local branch of your bank. How would your family's life be affected? Next, imagine that the corporate headquarters housing all the bank's data was destroyed. Now, how would your family's life be affected?