CAREER BRIEF

Steganographer

Steganography is the art of covered or hidden writing. The purpose of steganography is covert communication to hide a message from a third party. This differs from cryptography, the art of secret writing, which is intended to make a message unreadable by a third party but does not hide the existence of the secret communication. Although steganography is separate and distinct from cryptography, there are many analogies between the two, and some authors categorize steganography as a form of cryptography since hidden communication is a form of secret writing. Information can be hidden in image, audio, and video files.

EDUCATION

Most steganographers and cryptanalysts have at least a bachelor's degree in math, engineering, or computer science. They usually continue to take additional courses and training. However, some workers enter the occupation with a high school diploma and relevant industry training and certifications. In many cases an employer will provide and cover the cost ofthis training for qualified candidates. Additional pathways include foreign languages, criminology, information assurance and psychology. Having a good understanding of computing operating systems, such as Linux and network technology is important. Being able to comprehend scripting language also helps, but to be effective you will need operational experience as well.

WHERE THEY WORK

Steganographers work in a variety of settings, including educational institutions, bank and trust companies, financial institutions, insurance companies, scientific institutions, and research agencies. They also may work for telecommunications companies, computer design firms, consulting firms, science and engineering firms, and all levels of government, including special services and intelligence agencies.

FUN FACTS

The use of steganography dates back several millennia. In ancient times, messages were hidden on the back of wax writing tables, written on the stomachs of rabbits, or tattooed on the scalp of slaves. Invisible ink has been in use for centuries for fun by children and students and for serious espionage by spies and terrorists. Microdots and microfilm, a staple of war and spy movies, came about after the invention of photography.

Types of steganography include audio, video, text, image, and network.

During World War II, photosensitive glass was used to exchange hidden images and words between allied armies. In the same war Germans introduced microdots, which were complete documents, pictures, and plans reduced in size to the size of a dot and were attached to normal paperwork.

WHAT'S THE SALARY?

$102,600 per year
Bureau of Labor Statistics 2021 Median Pay

HIGH SCHOOL COURSES TO CONSIDER

Calculus, Linear Algebra, Differential Equations, Statistics, Chemistry, Physics, Computer Science, Networking

LICENSES- CERTIFICATIONS, & REGISTRATIONS?

Certifications like CompTIA Security+, CompTIA Cybersecurity Analyst (CySA+), and CompTIA Linux+ can help validate the skills and experience you have as you work towards your next move.

NICE FRAMEWORK WORK ROLES

Steganographers may have one or more work roles as described in the Workforce Framework for Cybersecurity. Some common work roles might include Systems Security Analyst, Application Security Analyst, Cyber Defense Infrastructure Support Specialist, Vulnerability Assessment Analyst, Information Systems Security Manager, Secure Software Assessor, System Testing and Evaluation, Threat Intelligence Analyst, Cybersecurity Specialist, Security Administrator, Pen Tester, Digital Forensic Analyst

WHERE TO FIND OUT MORE

Bureau of Labor Statistics Occupational Outlook Handbook I Information Security Analyst [www.bls.gov]

National Initiative for Cybersecurity Education I Workforce Framework for Cybersecurity [www.nist.gov/nice]