

# Edward Snowden

Edward Snowden is a former NSA software engineer and whistleblower. I have chosen to write this biography on him due not only to his skill as an engineer but also due to his moral integrity and willingness to stand up for his ethics.

## Early life

Snowden was born June 21<sup>st</sup> 1983 in Elizabeth City, North Carolina. His mother, father, grandfather and older sister were all employed in various branches of the civil service and he aspired to also work for the government. From a young age, he displayed great academic capability and graduated high school in 10th grade. He then went on to enroll in a community college. During this time he developed his passion for computers, which eventually led to him working in the intelligence community. He also maintained a love for Japan and Japanese culture, a love that would influence his decision to work in the country later in his life.

## CIA

In 2004 he enlisted in the army reserves as a special forces recruit but was discharged during training after breaking both legs. In 2005 he spent a year working as a security guard at a research center in the University of Maryland sponsored by the NSA. After attending a job fair in 2006 he was hired by the CIA to be part of their global communications division. Here he quickly distinguished himself as an extremely skilled software engineer and was sent to the CIA's secret school for technology specialists. He spent several years working in Geneva maintaining the security of US computer networks there. During his time in Geneva, he was considered the top "technical and cybersecurity expert" in the country and was "hand-picked" to support the US president at the 2008 NATO summit in Romania. He resigned from the CIA in 2009.

## NSA/Dell

Shortly after he stopped working for the CIA in Geneva, Snowden began work as a contractor for Dell at NSA offices on a US airbase in Japan. As a technical expert, he spent most of his time instructing US officials on how to defend their networks from Chinese hackers. This was the first time he was exposed to the enormous scope of the NSA's surveillance activities as well as targeted killings carried out by the agency. It was during this time that he began to lose faith in the mission of US intelligence services and began for the first time, to consider copying documents to release to the press.

In 2011 Snowden returned to Maryland and spend a year working for Dell as lead technologist on Dell's CIA account. During this time he was regularly consulted by the agency's chief technology officer and chief information officer. During his time working for Dell, Snowden designed and created one of his most impressive pieces of software: a widely implemented backup system for the NSA. He also routinely pointed out security flaws to the agency. His skills and tenacity impressed his superiors so much that he was offered a position on the NSA's team of elite hackers known as Tailored Access Operations, a role he

turned down to work at Booz Allen where he stayed until June 2013. While working at Booz Allen he copied many classified NSA documents.

### **Whistleblowing**

Snowden is probably most famous for his whistleblowing actions. In May 2013 he flew to Hong Kong, taking with him a huge amount of classified US intelligence documents he had copied during his time working for Dell and Booz Allen. He is a strong believer in the US constitution and while working for the NSA he kept a copy on his desk and would cite this when arguing against NSA activities he thought were unconstitutional. He disagreed with the large scale indiscriminate surveillance operations being carried out by the NSA and was quoted as saying "I do not want to live in a world where everything I do and say is recorded". His belief in the unconstitutionality of programs run by the American intelligence agencies led him to copy a large number of documents (1+ million) and selectively release a number of them (9000-10000) to the press to expose these programs.

Snowden's belief that many of the operations being run were unconstitutional was partially confirmed when, after the release of these documents, several US courts ruled the NSA's actions as unconstitutional. Snowden claims to carefully evaluate "every single document" before disclosing it to ensure it was "legitimately in the public interest". However, despite this, a document was released by the New York Times that exposed intelligence activities being carried out against Al-Qaeda in Mosul, Iraq.

The impact of Snowden's actions was far-reaching. They resulted in massive public outrage and continue to affect the actions of not only the US intelligence community but the global intelligence community. His release of documents detailing the NSA's efforts to weaken encryption standards led to many global companies to reevaluate their security and encryption processes eg Google increased the size of their TLS certificates from 1024 bits to 2048 bits. Several standards bodies also reviewed the participation of the NSA in the creation of encryption standards which the agency had purposefully complicated.

### **Opinion**

While his technical achievements as an engineer may not be as visible as many other, more famous software engineers, he demonstrated that engineers also have a responsibility to consider the impact of their actions and the ethical impact of their work. I view Edward Snowden as an inspiration, he is a technical genius and was described by a colleague at the NSA as "a genius among geniuses". He developed a sophisticated backup system used by one of the most technologically capable organisations in the world, he was personally asked by the CTO and CIO of the CIA to solve some of the agency's "hardest technology problems". However, beyond his technical skills, his ethical values are also important. I view his willingness to stand up for his beliefs as well his staunch belief in the constitution and the right to free speech as both inspirational and aspirational. Snowden chose to act on his belief that people had a right to not be constantly surveilled, actions that carried great personal risk. He decided to live his life in exile with no hope of returning home rather than continue to earn a substantial salary and turn a blind eye to the actions he would be supporting. Because of his technical skill and his strong moral integrity I find Edward Snowden to be an inspirational and influential software engineer.

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