

Cybersecurity Career Professional Paper

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A role that is a bridge between the development and operations team is called a DevOps engineer. These individuals are responsible for creating software while implementing security measures into the code. Four key social science concepts that are very important in this role are ethical neutrality, human behavior and psychology, social engineering, and cybercrime. By establishing these concepts into their practices, DevOps engineers can address and solve problems that marginalized groups face in cybersecurity.

Ethical neutrality is a very essential concept that DevOps engineers must implement into their day-to-day practices as they must implement fair security measures. As marginalized groups often face the backlash from these measures, DevOps engineers must ensure that the rules they create are fair to everyone. They must be able to implement these security measures without targeting a specific marginalized group. For example, there are many people who need different technologies to access the digital world and often there are security measures that block these individuals from platforms. While DevOps engineers are creating these security measures, all these factors must be considered and applied.

Secondly, there's human behavior and psychology which is crucial for DevOps engineers to learn about while creating software and security measures. These platforms that are created by roles such as DevOps or software engineers must be able to develop software that is user-friendly and effective for everyone. Marginalized groups often face challenges with cybersecurity due to different factors such as limited access to many things. The lower-income individuals may not have the same access to devices that are required for these platforms which leave more vulnerabilities, often ending up in a cyber-attack. By addressing these challenges DevOps engineers can design security measures that everyone can access, allowing even the marginalized groups to be protected.

Social engineering is also a key concept that DevOps engineers must fully learn and understand to protect themselves from outside threats. There are often many malicious acts that are made on development and operations teams to gather data or gain access to private systems. Learning and teaching techniques to these teams and themselves can ensure they won't fall prey to anyone. Marginalized groups are often targeted by social engineering techniques that will exploit their vulnerabilities. To mitigate this problem, professionals can implement security protocols to educate users on common practices and how to avoid them. DevOps engineers have many times taught marginalized groups about these practices and helped them defend themselves from these cyber threats.

Finally, cybercrime is a huge issue that DevOps engineers must work against. Cybercriminals often go after safeguarded digital infrastructures and data which is why individuals in this role must continuously learn and adapt to new technologies and strategies that will help them defend against these threats. Marginalized groups have a higher risk of becoming a victim of cybercrime often due to their lack of cybersecurity resources. DevOps are critical in ensuring that these groups are protected by creating security measures that prevent these cyber threats in the long term.

In conclusion, DevOps engineers need to learn about social science principles to be able to implement them into different practices and concepts such as ethical neutrality, human behavior and psychology, social engineering, and cybercrime. By implementing these practices, they can defend against the unique challenges that these marginalized groups face. DevOps engineers can create and implement security measures that protect all users from cyber threats regardless of their circumstances and ensure a more equal and secure environment for all individuals.

References:

Atlassian. (n.d.). *What is a devops engineer?* <https://www.atlassian.com/devops/what-is-devops/devops-engineer#:~:text=A%20DevOps%20engineer%20is%20an%20IT%20generalist%20who,company%20silos%20to%20create%20a%20more%20collaborative%20environment>.

Devops engineer job description: Role, Responsibilities & Skills. EPAM Anywhere. (n.d.). <https://anywhere.epam.com/en/blog/devops-developer-job-description>

What is a devops engineer and what does a devops engineer do?. GitHub Resources. (n.d.). <https://resources.github.com/devops/what-is-a-devops-engineer/>