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The Role of Vulnerability Disclosure on Hacker Participation in Bug Bounty Programs

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The Role of Vulnerability Disclosure on Hacker Participation in Bug Bounty Programs

Short Paper - Forty-Second International Conference on Information Systems, Austin 2021

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Brian Lee, Penn State University
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"The Role of Vulnerable Disclosure on Hacker Participation in Bug Bounty Programs"
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ICIS 2021 Proceedings

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In this paper, we have analyzed voluntary vulnerability disclosure by firms and its effects on ethical hackers' participation in their bug bounty programs. Specifically, we have analyzed the effect of disclosed (patched) vulnerability reports and how it affects new hackers' participation in a bug bounty program. Using a dataset from a leading bug bounty platform, we have shown that disclosing valid vulnerabilities attracts new hackers to the program and experienced hackers to the program. However, the disclosure of invalid reports decreases the participation of experienced hackers in a program. Our findings broaden our understanding of working with ethical hackers on bug bounty programs and contribute to the debate in operations management on working with a crowd in an open crowdsourcing platform.