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# AI and cybersecurity 2021: proceedings of the 2021 Workshop on AI and cybersecurity (AI- Cybersec 2021).

SANI, S. and KALUTARAGE, H. (eds.)

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*This file contains the preface to the proceedings. The full proceedings are available on the publisher's website: <https://ceur-ws.org/Vol-3125/>*

# AI-CyberSec 2021

## Workshop Proceedings

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Selected Papers from the AI-CyberSec 2021 Workshop in the  
41st SGAI International Conference on Artificial Intelligence

14 December 2021

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Sadiq Sani | Harsha Kalutarage

# AI-CyberSec 2021- 1st International Workshop on Artificial Intelligence and Cyber Security

Artificial intelligence (AI) is currently driving transformations in many fields, and cybersecurity is no exception. With recent advances in AI, security practitioners have applied AI to improve the security posture of networks, systems, and devices with significant success. However, along with the benefits of AI, new concerns are emerging; including safety & ethics, privacy & data protection, and data quality and adversarial attacks that exploit the vulnerabilities of AI systems. In addition, AI can be used to create more sophisticated attacks triggering an AI arms race between defenders and attackers. In order to effectively use AI for cybersecurity and to address these challenges, novel ideas and effective approaches must be explored.

This volume consists of the papers that were presented at the 1st International Workshop on Artificial Intelligence and Cyber Security<sup>1</sup>, co-located with the 41st SGAI International Conference on Artificial Intelligence (AI-2021) on December 14th, 2021. The workshop focused on three research areas that intersect with AI and Security:

1. **AI for cybersecurity** - studies that cover effective use of AI techniques to improve the security of systems and networks
2. **Malicious use of AI** - studies that cover how advances in AI lead to new types of threats, expanding the existing threat landscape
3. **Cybersecurity for AI** - studies that cover vulnerabilities of AI-enabled systems and how to protect AI-enabled systems from potential threats

On this occasion, 22 submissions were received, of which 9 were accepted for presentation at the workshop and inclusion in the proceedings. Each submission was reviewed by two or more subject matter experts.

06 March 2022  
(Editors)

Sadiq Sani, Harsha Kalutarage

<sup>1</sup> - <https://sites.google.com/view/ai-cybersec-2021/home>

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