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Uma N. Dulhare · Essam Halim Houssein
Editors

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Editors
Uma N. Dulhare
Muffakham Jah College of Engineering
and Technology
Hyderabad, Telangana, India

Essam Halim Houssein
Faculty of Computers and Information
Minia University
Minia, Egypt

Chapter 9
Artificial Intelligence-Based Internet of Things Security

Ramesh Chandra Goswami, Hiren Joshi, and Sunil Gautam

Abstract Internet of Things (IoT) is a network of interconnected, web-connected devices that can collect and transmit data across a wireless network without requiring human contact. People feel more at ease and relieved as a result of the Internet of Things. IoT devices give users the freedom to produce reports without constraints and access information even in remote locations. Additionally, they accurately direct people with wise judgements using communication technologies, as was already mentioned. Preprocessing is necessary since many linked devices gather a lot of raw sensed data. However, it only becomes something important since IoT devices require sufficient resources for edge computing. The essential tools for information inference in edge computing are AI-based algorithms. Additionally, the sensed data gathered by IoT applications is typically unstructured and requires further analysis, where AI-based models assist in extracting pertinent data. Additionally, there is a possibility for malicious arracks when data is transmitted from device to device. The use of Artificial Intelligence (AI) approaches to improve the security of Internet of Things (IoT) systems is explored in this chapter.

Keywords Internet of Things · Artificial intelligence · IoT protocols · Security and privacy · Intrusion detection systems

R. C. Goswami (✉)
Kadi Sarva Vishwavidyalaya, Gandhinagar, India
e-mail: rameshsd4@gmail.com

H. Joshi
Gujarat University, Ahmedabad, India
e-mail: hdjoshi@gujaratuniversity.ac.in

S. Gautam
Department of Computer Science and Engineering, Institute of Technology, Nirma University, Ahmedabad, India
e-mail: gautamsunil.cmri@gmail.com