

# A Study on Detection of Anomaly Behavior in Automation Industry

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*Abstract— After the Third Industrial Revolution, which was based on computers and the Internet, recently the fourth industrial revolution appeared based on ICT convergence such as artificial intelligence, robots, and Internet of Things. Already in the tertiary industrial revolution, most of the machines were automated and the concept of Smart Factory appeared. This makes industrial systems easier to access and emphasizes the importance of security. Therefore, there are many security methods and systems for external intrusion and attack. Also, internal security is important because information leakage by insiders, tampering operations, and security accidents caused by malfunctions of machines also occur. However, there are not many systems, solutions, and methods for information leakage and attack in a damaging internal environment, and there is a low awareness of security. In this paper, we analyze the trends on the system, solutions and research for the detection of anomaly behavior in the present automation industry system and internal.*

**Keywords—** Detection of Anomaly Behavior, Automation Industry, Internal Security, Security in Industry



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