

A systematic review of artificial intelligence in animal husbandry ⁽¹⁾

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Abstract

The application of artificial intelligence (AI) in livestock farming is drawing increasing attention, especially in fields of improving production efficiency, monitoring animal health, individual identification, and enhancing feeding techniques. This article focuses on research conducted between 2014 and 2023, exploring the facets of AI discussions in livestock farming, the subjects of study, and the technologies employed. Using the Web of Science database, the research collected and screened 30 articles as the primary research papers. In the realm of livestock farming applications, the discussed aspects included animal behaviors, individual identification, feeding assistance, health monitoring, breeding and reproduction, and counting. The research subjects primarily comprise economically and nutritionally valuable animals worldwide, including cattle, pigs, and sheep. Moreover, the research employed deep-learning techniques more than those using machine-learning techniques. The advanced technology, AI, is poised to optimize the management and production processes in livestock farming, making substantial contributions to the future development of the industry.

Key words: Animal Husbandry, Livestock, AI, Machine Learning, Deep Learning.

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