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Digital Twins in Agriculture: A State-of-the-art review

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Abstract

The Digital Twin enables the distinctions between state sensing, entity understanding and physical automation to be eliminated, through high-fidelity modelling and bi-directional data streams. The concept of real-time virtual representation places the Digital Twin in a unique position to enable digitization in agriculture. The union of data, modelling and what-if simulation can provide an approach to overcome current limitations in decision-making support and automation, across a diverse range of agricultural enterprises. This paper conducts a Systematic Literature Review of Digital Twins in agriculture, identifying current trends and open questions with the goal of increasing awareness and understanding of the Digital Twin and its possibilities.

Keywords: digital twin, agriculture, digital agriculture, what-if simulation, decision support, agricultural a

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