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College of Sciences and Technology

Virtual Research Seminar

A Fuzzy Inference Model for IoT Shiitake Mushroom Farm Monitoring and Control

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Abstract:

Mushrooms are considered as one of the main sources of both medicinal and culinary products. Growing mushrooms by watering have been taken into consideration with attention as an efficient way of producing the desired harvest in them.

Shiitake mushroom (Lentinula edodes) is the most important culinary medicinal mushroom which ranks at number two in terms of total mushroom production in the world only next to button mushroom. Shiitake is beneficial for soothing bronchial inflammation and regulating urine incontinence as well as for reducing chronic high cholesterol, therefore shiitake mushrooms need to be scientifically increased in the harvest.

However, the production in mushrooms is less because of traditional methods such as manual greenhouse for mushrooms, mushrooms' cultivation on tree logs, fixed time based watering method, that are implemented with manual approaches, and thus present a gap in preciseness to manage vital parameters of the mushrooms.

Internet of things (IoT) based smart farming system is an agricultural solution that is built for monitoring the crops growing medium. This involves IoT-based technologies to enable farmers to optimize the usage of agricultural resources such as water, electricity, fertilizers, and others to enhance crop productivity.

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