SMART CROP PROTECTION USING IOT

PHASE I REPORT

Submitted by

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In partial fulfillment for the award of the degree of

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IN

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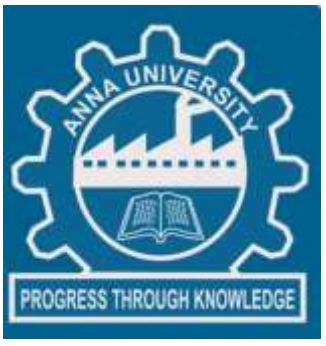

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BONAFIDE CERTIFICATE

Certified that this project report titled **"SMART CROP PROTECTION USING IOT "** is the bonafide work of **"R.vignesh" (211119205501)** who carried out the project work under my supervision. Certified further, that to the best of my knowledge the work reported here in does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion or any other candidate.

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ABSTRACT

Agriculture has become more industrialized and intensive due to the rising demand for food in quality and quantity. Agricultural modernization will be made possible by the Internet of Things (IoT), a technology with a great promise for revolutionizing the industry. Agricultural products will be in high demand by 2050 due to a 30% increase in the global population, so there is a need to devise new mechanisms for agriculture, and smart agriculture is one of those mechanisms; however, smart agriculture needs to be explored further to realize its potential fully. So, to explore the potential of this field, the researchers have used a corpus that is extracted from the Scopus database from the year 2008 to the year 2022 and applied the LDA technique. A corpus of 4309 articles was selected from the Scopus database to apply the latent Dirichlet analysis (LDA) model to predict research areas for smart agriculture. Using IoT technology, farmers and producers may better manage their resources, such as fertilizer consumption and the number of trips made by farm vehicles, while minimizing waste and maximizing productivity, including water, electricity, and other inputs. This data-driven experimental study identifies smart agriculture research trends by implementing a topic modelling technique previously used in smart agriculture. The authors have created seventeen research themes in smart agriculture based on the LDA topic modelling. This analysis suggests that the indicated areas are in the growth phase and require further research and exploration.

There are reasonable efforts to emphasize the importance of IoT in agriculture; most published work [6] focuses solely on applications. However, in light of the most recent facts and data, most current publications either give little insight or place a limited emphasis on diverse IoT-based designs, prototypes, advanced approaches, IoT for food quality, and other future issues. The current state of IoT-based agriculture research is examined in this paper.

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