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Patent Search

Invention Title	CLOUD SUPPORTED AND MACHINE-LEARNING DRIVEN EFFICIENT IOT BASED WATERING SYSTEM FOR HOME BASED PLANTS
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Inventor

Name	Address	Country	Nat
Kamlesh Kumar Raghuvanshi	Department of Computer Science, Ramanujan College New Delhi India	India	Indi
Santosh Kumar Pandey	Department of Electronics and Information Technology Ministry of Communication and Information Technology New Delhi India	India	Indi
Dr Arun Kumar	Department of Computer Science, Ramanujan College New Delhi India	India	Indi
Dr. Chandra Bhooshan Singh	Chandra Shekhar Azad University Of Agriculture & Technology, Kanpur	India	Indi
Prof Manu Pratap Singh	Department of Computer Science, Dr. Bhimrao Ambedkar University, Agra (U.P)	India	Indi
Dr Vikas Kumar	Chaudhari Bansi LaL University Bhiwani Haryana	India	Indi
Khushboo Jain	School of Computing , DIT University Dehradun	India	Indi
Jitendra Singh	Dyal Singh Evening College University of Delhi	India	Indi
Prof. VB Singh	School of Computer and System Science(SC &SS) Jawahar Lal Nehru University, New Delhi India	India	Indi
MAHESH KUMAR CHAUBEY	BHARATI VIDYAPEETH (DEEMED TO BE UNIVERSITY) INSTITUTE OF MANAGEMENT & RESEARCH, NEW DELHI	India	Indi

Applicant

Name	Address	Country	Nationality
Jitendra Singh	Dyal Singh Evening College University of Delhi	India	India

Abstract:

A machine learning based watering system hosted on cloud environment will learn the water requirement of a plant that is governed by several attributes that include temperature, humidity level, 'wind velocity', 'wind direction', 'evaporation rate', 'sunshine hours', and 'soil water holding capacity'. This invention learns the water requirement of a plant with the help of water consumption of each plant identified by their unique ID. Based on quantity of water required, plants are categorised into low, medium and high watering plants. A water outlet with three openings is controlled by a controller need to be placed in water supply line that regulates the water flow according to the plant's category. Water system will get activated once the dryness of a plant touched to a pre-determined threshold. Corresponding to the learned water requirement and prevail constraints, water will be poured. Watering of plants that is just enough to its water need ensures judicious use of water.

Complete Specification

This invention applies a machine algorithm based approach that drives the storage capability and computational power from the cloud environment. In order to watering the plants, sensors are placed in the vicinity of plant that assist in gathering the ambient conditions that include temperature, humidity level, wind velocity, wind direction, evaporation rate, sunshine hours, and soil's water holding capacity.

BACKGROUND

[002] Machine learning techniques are capable to explore the hidden pattern lie deep inside a dataset. Algorithms that work on attributes and their corresponding label is enumerated are termed as supervised learning, wherein the other one that works with the missing labels is termed as unsupervised learning. Under unsupervised learning KMeans, DBScan, Grid Based, etc. are capable enough to establish the relationship among the given attributes. In order to achieve the high degree of accuracy, larger dataset is preferred to cover the majority of the instances and the value range that corresponds to labels.

[003] Some time single algorithm is unable to yield promising outcome hence a

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