V.S.B.ENGINEERING COLLEGE, KARUR

Department of Electronics and Communication Engineering

LITERATURE SURVEY

TITLE : IOT based smart crop protection system for agriculture

DOMAIN NAME : Internet of things

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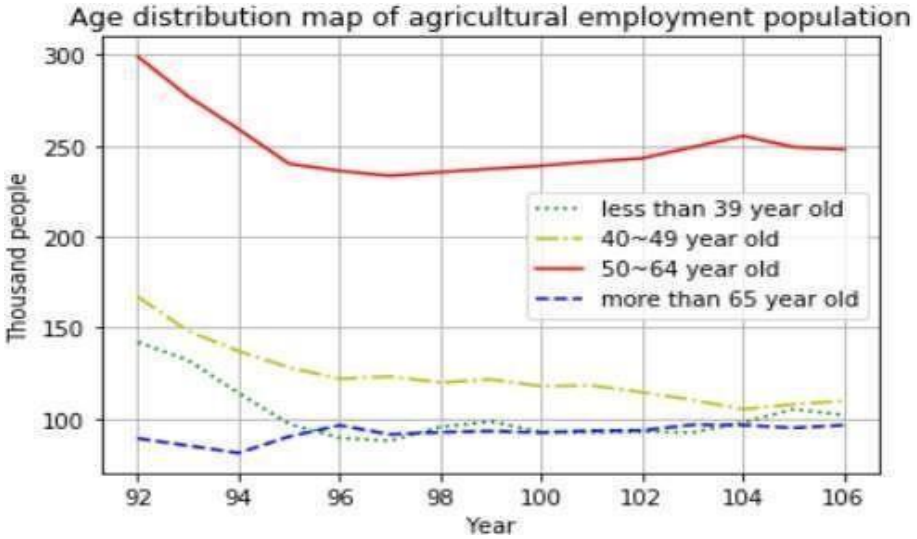
ABSTRACT

A centralizing method in the area of IoT (Industrial Internet of Things) contrived for understanding agriculture which is preceding the arrangements low-power devices [5]. This paper yields a monitoring procedure for farm safety against animal attacks and climate change conditions. IoT advances are frequently used in smart farming to emphasize the standard of agriculture [6]. It contains types of sensors, controllers. On behalf of WSN, the ARM Cortex-A board which consumes 3W is the foremost essence of the procedure [9]. Different sensors like DHT 11 Humidity & Temperature Sensor, PIR Sensor, LDR sensor, HC-SR04 Ultrasonic Sensor, and camera are mounted on the ARM Cortex-A board. The PIR goes high on noticing the movement within the scope, the camera starts to record, and the data will be reserved on board and in the IoT cloud, instantaneously information will be generated automatically towards the recorded quantity using a SIM900A unit to notify about the interference with the information of the weather conditions attained by DHt11[14]. If a variance happens, the announcement of the threshold rate will be sent to the cell number or to the website. The result will be generated on a catalog of the mobile of the person to take the necessary action [7].

INTRODUCTION

IoT (Industrial Internet of Things) tendencies are often utilized in smart farming to boost the standard of agriculture [2]. But our productivity remains enormously diminutive as associated to world standards [1]. Societies after pastoral areas drift to a municipal extent for her lucrative commerce besides they can't deliberate on crofting. In detail, moderate smart irrigation systems are utilized to afford the solution for dissimilar variety of plants in spite of getting the solution for moisture related issues Weather conditions like temperature, humidity and moisture are difficult to check manually frequently [9]overcome all these a new system is proposed constructed on cloud of Effects (IoT).Wildlife requisite overlaps personage laypeople, creating fee to inhabitants and cultivated field. Wild animals regularly ruin eminence of crops [20]. The low productiveness is mainly due to the

reasons, the crop ruined by means of untamed animals and yield ruined by way of nature object [34]. Cultivators are experiencing numerous challenges for attaining more production due to unexpected encounters of animals, slight sorts of species, beetles, some hazardous snakes and weather circumstances. Within the existing system, electrical protection is used to give up untamed animal assaults on vegetation which leads to the death of animals [2]. The surveillance and monitor of the tiny species, bugs and snakes are tough because of their aspect and flora of effort [5]. A well-known wild animal safety observation that may final for a lot of Fencing is years. However, utilizing fences as a train is often [8]. Therefore, earlier than deciding on an acceptable fence, it is vital to examine native law regulations [3]. The high quality of fencing depends upon the material and structure [10]. Counting on how it's made and what it's made from, some everlasting fences can last as long as 30 years. Previously buying electrical fences, it is very meaningful to be certain that they're allowed to be used in the precise area, and for defense towards endangered animal species [12]. Furthermore, it is steered that electrical fences are marked with a warning signal to stop any doable human contact. Climatic conditions be keen on temperature, humidity and moisture are troublesome



The purpose is to grant monitoring device for crop safety to animal outbreaks and environment circumstances [15]. This supports to preserve stretch and cash by dipping the physical exertion, else obligatory if the cultivators themselves have to afford guard for their crops with their endless physical administration [16]. Wildlife regularly wreck eminence crops, because of which annual manufacturing of vegetation reduces inflicting monetary victims to cultivators [19]. Agriculturalist suicide is huge bother due to less harvest [21]. This low harvest is duet the circumstance of two most significant purposes i.e. Crop wrecked via untamed animals and Crop wrecked by meteorological conditions [27]. The ranchers will treasure these SMS containing location [4]. The prime thing of this task is to furnish a great reply to this distress [19]. Each time either the wild animal or species are identified through PIR sensor which stimulates the web camera and gives rise to alert the buzzer in the locality, associates to the farmer direct to the cloud [21]. When the moisture content is inferior to a terrifying level the sensor planted makes the water pumps to turn on [23]. This ensures the complete safety of crops from animals also as from the weather conditions thus prevent the farmers [22].

LITERATURE SURVEY

IIOT tendencies are often utilized in smart farming to boost the standard of agriculture [2]. Farming the pillar of supports our country to the general commercial development. But our productivity is extremely low as associated to world standards [31]. People from rural areas drift to an urban area for other worthwhile trades and they can't concentrate on agriculture [14]. There are many disadvantages of the current traditional agricultural methods namely costlier and manual monitoring of the agriculture field [8] . Specifically, small-scale smart irrigation systems are utilized to provide the solution for dissimilar variety of plants in spite of getting the solution for moisture related issues Weather conditions like temperature, humidity and moisture are difficult to check manually frequently [4]. Farmer suicide is

turning into big problem due to low productiveness amongst farms [3]. This low productiveness is due to the fact of two main reasons, Crop ruined by means of untamed weather conditions untamed animal attacks, small types of species, insects, some hazardous snakes and weather circumstances.
Within the existing system, electrical fencing is used to give up untamed animal assaults on agricultural vegetation which leads to the death of animals [6]. The fundamental objective is to provide a fantastic answer to this problem, so that losses incurred will be minimized and farmers will have an accurate crop yield [26]. This low productivity is because of the fact of two most important motives i.e. Crop destroyed via untamed animals and Crop damaged by using nature object [18]. The main objective of this assignment is to furnish a fantastic answer to this trouble, as a result with the purpose of the economic losses incurred through the support of our farmers are minimized to get truthful crop yield [22]. This ensures complete security of vegetation from animals and defending the farmers loss. In the proposed system Raspberry Pi, PIR sensor, web camera, ultrasonic sensor, LDR sensor, temperature sensor, humidity sensor, moisture sensor, buzzer and monitor are used [15]. This field of this effort remains towards withdraw to monitor the system for crop security conflicting to subconscious occurrences and meteorological conditions When the moisture content is below a critical level which is determined by the sensor planted in the fields, as the system is automated the water pumps are switched on [33]. This ensures complete safety of crops from animals also as from the weather conditions thus prevent the farmers loss.

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