

Review of IoT based Smart Village for the Rural Development

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Abstract - this review paper presents different methods to implement IoT based smart village. Smart villages are rural communities which use innovative solutions to enhance their sustainability, built on local strengths and opportunities. The idea of smart village would help villages become self-reliable that can encourage foreign and domestic investors. Various techniques are also discussed, such as smart irrigation, safety, and soil testing, automatic street lights which are used for implementation of smart village.

Keywords - IoT based Smart village, pH, Smart city, Soil moisture, and Street light.

I. INTRODUCTION

Some of India's greatest challenges are growing growth and rapid urbanization. This urban growth is inevitable to such an extent that the economic interests and aspirations of the population are shifting and expanding. It will be reversed and managed properly by a variation of the "Smart City" standard of life between rural and industrial would include long-term social, economic and environmental development initiatives for rural populations that would be willing to inspire greater involvement in municipal government systems, promote creativity to create more diverse neighborhoods. "Smart Village" would ensure proper schooling, improved services, effective sewage systems, utilities, green health facilities, electricity, environmental control of waste, safe drinking water, resource quality, etc.

Improving a smart village focused on IoT requires a cloud-based network that will include a decentralized environment for storing and incorporating device wide analytics resources for tracking facilities, storage, and simulation. IT-OT Convergence to introduce IoT-based Smart Village for Rural Development Intelligent billing and data collection in Power management is used. Easy IoT-based smart village datasets, such as smart agriculture, smart protection and soil monitoring, street lights, and so on, are evaluated for the construction of a smart village.

Automated and semi-automated systems can be used to irrigate the area that can replace the conventional system in

agriculture.

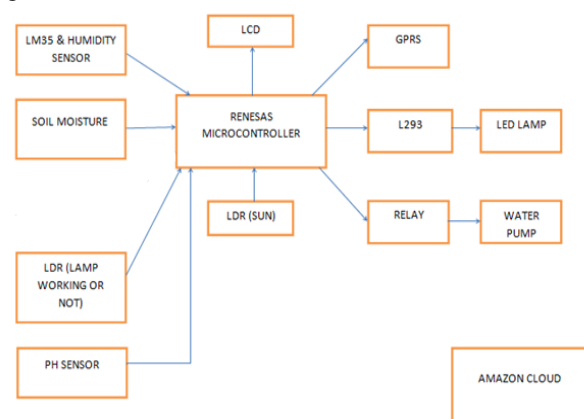


Fig1: Block Diagram

The pH, soil moisture levels and the consistency of the soil is calculated for better crop production based on those values. The relay will work based on the amount of moisture contained in the surface, and the water pump can be turned on and off. The intelligent fencing voltage safety measures also monitor successful fence voltage, and produce an alarm whenever an array is split, shortened. Street lights can be installed and can be turned on or off according to the situation using LDR.

Cloud services like Amazon Web Services (AWS) can be used to store data obtained from IoT devices which be used for future uses.

II. LITERATURE SURVEY

Bah A et.al proposed Sensor technologies for precision soil nutrient management and monitoring and discusses the potential of different sensors such as electrochemical sensors, radiometric and optical sensors, acoustic sensors and mechanical sensors. Such sensors play an important role in characterizing the soil nutrient variation and different soil nutrients in a non-destructive and rapid manner. They also suggested various sensors that are specifically appropriate to assess may be a few soil traits. The soil's physical and mechanical attributes are separated by acoustic sensors. [1]

S. Aswathy et.al proposed Smart Soil Testing aimed to provide services for soil testing at the farmer's doorstep by using the respective sensors to determine the pH material. The LCD is used to display the measured interest that allows farmers to receive a recommendation for crops and fertilizers on the website. Active observation helps the farmer to learn their land at any time. Data in the database must be analyzed effectively in order to produce efficiency. The smart soil monitoring system should provide a repository to help with the collection and processing of consumer details, plant data and fertilizer details. [2]

Anchit Garg et.al presented Applications of Soil Moisture Sensors in Agriculture. At present, the world is confronting a deficiency of water that is hampering rural turn of events and thus food creation. In this way, there is a requirement for prudent utilization of water and, in farming specifically, ideal utilization of water is significant since water is scant in many parts of India. Dampness from the dirt is key information in accomplishing ideal harvest water necessities. The dirt accomplishes limit on the field yet water permeation proceeds because of slender activity and gravity. In the event that dirt water surpasses the limit of the field the overabundance water depletes out (immersion point). [3]

Sachin Kumar et.al proposed Techniques and methods for measuring soil pH. Soil pH is a principal field output level. As a consequence, the spatial variations will be discussed enough to strengthen the framework for the monitoring of agricultural precision. Soil pH influences the physical, concoction and organic properties of the soil. [4]

Rashid Hussain et.al proposed Control of Irrigation Automatically by Using Wireless Sensor Network and discusses that the Sensor of soil moisture detects soil moisture. The three layers of the soil are monitored by three sensors. Microcontroller controls the efficiency of the sensor and produces the signal. If the soil moisture level is high, the valve unit will remain closed and the valve unit will remain open when dry. The predictor indicates that the soil is dry or rainy. Microcontroller controls the operation of the engine and transmits data to the device. Irrigation water and livestock watering should be used for water conservation purposes. Heat raises the soil density and soil water content is conveyed via GSM-BLUETOOTH app to mobile farmers through SMS. [5]

Pavankumar Naik et.al proposed Automation of Irrigation System Using IoT. The utilization of IoT is expected to make a programmed water system component which will kill the engine on or relying upon the degree of soil dampness. In this paper, the authors have considered the significance of soil dampness and upheld the augmentation of the venture by joining temperature and moistness esteems. This technique sends information through SMS yet information to a versatile application by means of the proposed framework. The technique discussed here is a remote water system framework situated in Arduino, intended for remote farming that gives water to planting when soil dampness is underneath the set-point esteem. [6]

Yuthika Shekhar et.al Proposed Intelligent IoT Based Automated Irrigation System. This paper discusses an automated ground-specific watering system with a detector for soil moisture and a sprinkler for the valve control. Portable Bluetooth transmitter detects moisture material, temperature, etc. and then transmits the signal to the base station (BS) dependent on field and irrigation period. Here, the authors have focused on field Water Requirement. [7]

Ranjith.E et.al proposed Arduino Based Automated Irrigation Framework and talks about the Sensor hub that detects soil dampness in each field and detected information is transmitted to the controller hub. When the sensor becomes the controller hub contrasts it and the proper soil dampness esteems. On chance that soil dampness in a surrendered field is not at the specific stage, the controller hub flips on the generator at that point to inundate the particular area and sends an Alert warning to the enrolled mobile phone. A route key for setting the working mode and a LCD for showing sensor information is given for the detected information. The computer can work in three separate methods: operator, automatic, and wireless. Through auto mode, the main cushion operates on the system activities. In auto mode the operation of the frame is based on criticism from the dirt humidity sensor. [8]

K. Nirosha et.al proposed Automatic Street lights on/off Application using IoT providing correct utilization of power for dominant street lights. The aim is to build a smart phone device for on / off automated street lights. The concept of a brand-new street lamp network that does not waste large volumes of electricity and illuminates massive areas with the maximum illumination strength extends to any engineer working in this field. Provision of street lighting is a vital and high-ticket duty for towns. For average communities around the world, illumination would compensate for 10-38% of the overall electricity bill. Road lighting may be especially important problem for the development of nation-open specialists because of its crucial significance to financial and social stability. The new Streetlight system is not adaptable. [9]

K.Tamil Selvan et.al proposed IoT based road light checking framework and proposes a vitality effective ZIGBEE-based open air light observing and control framework that can screen and handle outside lights more proficiently when contrasted with the ordinary framework. The proposed framework utilizes remote gadgets dependent on GPS which consider progressively proficient administration of lights. A brilliant road light can be utilized to limit urban waste by up to 50-70%. A shrewd lighting framework essentially changes the light contingent upon how it is utilized. [10]

Prashanth Keni et.al proposed Automated street lighting system using IoT Streetlights and are a basic piece of any creating territory. They are additionally present on every single significant street, and furthermore in suburbia. Consistently, the streetlights are controlled at full quality from nightfall to dawn, in any event, when nobody is near. On a worldwide scale, a large number of dollars are spent on these

road lights each day to give the electrical vitality required. The expenses of overhauling and supplanting customary brilliant bulbs are gigantic. They use a lot of vitality to work and their warmth outflows are additionally high. [11]

Bipul Kumar Talukdar et.al proposed Design of a Street Light System in a Smart City. Implementing IoT, the street light system is one of the major elements in every cities and small towns. A system will be highly beneficial if the street light can be controlled from a centralized location remotely without wire connectivity. The wireless Connectivity is again distinctly useful if the street lights are powered by battery back-up and solar energy. In case of street lights in many places conventional street lights are replaced by Automatic Street light which is based on light intensity sensor [12]

Supreeth S K et.al proposed IoT Wild life Monitoring, Virtual Fencing with Deforestation Notifications. The paper diagrams virtual fencing dependent on RF board. There, the collector can wake up with a signal if the creatures attempt to reach the transmitter range and show a warning on the LCD. The remote sensor device, which involves microcomputers, antennas, and sensors, serves as a transmitter and is installed into the cows' neck collars and discharges the signal as the animals exceed the simulated mark. Owing to the disturbance that occurs as the creatures reach the border, the creatures get afraid and make sure they remain inside the border. The warning alert is sent to the authority in the backwoods as the animals breach the border. [13]

Dr. N. Srinivasa Rao et.al proposed Smart Fencing for Crop Field Monitoring proposed topology; venture is utilized to follow the area of Animal in the natural life stores or national parks. For this reason, the RFID (Radio Frequency Identification Device) module and a GSM (Global Mobile System) modem is utilized. These SMS containing territory in which creatures experience Radio Frequency Identification (RFID) are utilized to distinguish a gadget that transmits the character (as a particular number) of an item or remote individual utilizing radio waves. It's recorded under the wide computerized acknowledgment innovations classification. This paper assists with checking Animal's area in natural life stores or national parks. To that end, this paper utilizes a RFID module and ZIGBEE. Timberland or individual with government authority will acquire these SMS containing region in which the creatures are watching. [14]

Krishnamurthy B et.al proposed Solar Fencing Unit and Alarm for Animal Entry This may even bring about assistance contacting you after it is past the point of no return. When shrubs or trees grow in the field, there is a chance of electric walls providing fire hazards. Subsequently, keeping the area close to the fence free of all the vegetation is critical. Hence, we will have to mean that the execution was adequately carried out. The inability to do so will ineffectively make the electrified barrier. In this case animals will risk their lives and it is, however, highly risky for individuals. [15]

Prabavathi et.al proposed Smart Security for farming utilizing IoT. As shown by the previous production protection analysis, leaving countries use regular storerooms for staple food crops unable to guarantee them, creating 20-30% failure

of agricultural products, e.g. corn, maize and so on, according to the other appraisal, 5-10% of the difficulty of corn alterations all regarded, Which is a direct consequence of the harm done by rodents. In fact, these rodent effects are correlated with severe rodent-borne diseases. [16]

Ankit D. Gangani et.al proposed Planning Aspects for Betterment of Smart Indian Village; This paper addresses basic requirements, different Indian scenario village systems, strategic planning strategies and other key aspects of smart village development. Access to renewable energy services in Smart Villages acts as a catalyst for growth providing Better schooling and healthcare, exposure to safe water, sanitation and safety, expanded productive income-generating businesses and enhanced prosperity, gender parity and political engagement through a range of technical means. This effort at village growth is indeed for the good of the society. [17]

Dr. Pritesh Y Shukla et.al proposed The Indian smart village: Basis for developing India, the current scientific paper describes developed state for the elevate person of the rural masses in underdeveloped countries. The driving force behind the "Smart Village" vision is that technology will act as a means of growth, promoting education and small development opportunities, improving health and safety, enhancing civic engagement and improving small villages' total growth possibilities. Now the hour is required-policy, political planning and, above all, controlling and executing the operations utilizing appropriate models of governance. As for information and data technologies, the present era is rising. The program has proven its value in numerous fields of urban and agricultural production. Researcher made an attempt to examine the factors and their consequences for the smart village. [18]

Gayathri Natarajan et.al proposed Implementation of IoT based Smart Village for the Rural Development; IoT-based smart village technology is designed to encourage value-added village and citizen characteristics, while retaining a broad and nuanced framework defined by a particular application domain. Rural planning is planned to exploit the new networking technology to the Smart Village initiative. IoT-based smart village architecture is designed to encourage value-added village and citizen characteristics, while retaining a broad and nuanced framework defined by a particular application domain. Rural architecture is planned to exploit the new communication capabilities for the Smart Village initiative. [19]

Rutuja Somwanshi et.al proposed Study and development of village as a smart village; the research and creation of villages as smart villages and describes smart villages as a package of services that are easily and efficiently delivered to their households and businesses. "Smart City" implies that new access to energy serves as a driver for development in the fields of education, safety, security, sustainable business and the atmosphere. In this study, the focus is on better capital efficiency, local self-governance, and connectivity to ensuring public services and constructive person and group behavior to build happy society. Villages may be transformed into smart villages by utilizing modern technology and wise decision taking methods. [20]

III. COMPARISION

AUTHOR NAME	METHODOLOGY	RESULT	OBSERVATION MADE
Bah A et.al	Basic plant control is viewed as a tool for increasing soil organic carbon sequestration in oil palms. Berry et al .(2005; 2003) used a modeling method focused on the combination of geographical details and geo-statistics to model water and solvent transport spatially in large cropland.	Soil dampness in each field is estimated by the sensor. The gateway and the data observed are sent to the control panel. In the wake of having the sensor confidence, the device hub checks it with the right soil dampness confidence. In the event that soil dampness in a given field is not up to the necessary number.	This analysis focuses mainly on the deployment of chosen on-the-go sensors that are currently used for in-situ soil evaluation and may theoretically be used for nutrient specific control and tracking. The controller hub tests it with the right soil dampness esteem in the wake of getting the sensor esteem. In the event that dirt dampness isn't up to the necessary sum in a specific field, at that point the controller hub turn on the engine to inundate the pertinent field and send SMS caution to the enrolled cell phone.
S. Aswathy et.al	It provides soil testing services to the farmers Doorstep using the respective sensors to determine all soil characteristics such as pH, EC, nitrogen, potassium, and phosphorus content.	The key outcome of this paper is to include recommendation for soil-specific crops and crop-specific fertilizer along with a study on soil science. After the sensor value is collected the device node compares it with the right soil moisture value.	The main outcome of this paper is the provision of a soil-specific crop recommendation and a crop-specific fertilizer recommendation along with a soil analysis report. After the sensor value is collected, the device node compares it with the right soil moisture value.
Anchit Garg et.al	The use of soil moisture sensors allows farmers to schedule their irrigation by providing information on when to water the crops.	Tensiometers are straightforward soil dampness estimating gadgets frequently utilized in water system planning. The cylinder comprises of water that ought to be liberated from air. The permeable earthenware cup is set in the dirt so that the water weight of the dirt is transmitted to the tensiometer, which is perused by pressure detecting gadgets mounted on the tensiometer. This instrument doesn't gauge soil dampness content legitimately, however rather quantifies soil water voltage.	The production of wireless communication applications in the fields enables the efficiency, productivity and profitability of traditional agriculture to be increased, as well as the maximum crop yield with the minimum use of irrigation water moisture value after the sensor value is obtained.
Sachin Kumar et.al	The ISFET uses a different pH-measurement system than typical glass electrodes Measurements. The theory is based on two semiconductor electrodes regulating the current flow between them. Those are the two electrodes which are called drain and source electrodes and are positioned between them in a silicon chip along with a third electrode (gate).It is the gate	Soil pH directly impacts the physical, chemical and biological characteristics of the soil and therefore plant development.	Enhanced nanotechnology-based in-situ pH-sensing approach is efficient, using ZnO, nanoparticles to increase electrode sensing efficiency.

	where the solution to be weighed must be in direct contact with. The electrode gate is made of a special chemical film. Are vulnerable to hydrogen ions.		
Rashid Hussain et.al	The moisture sensor's digital output value is sent to the Raspberry pi via RF module, which decides whether the soil is wet or dry. Raspberry Pi turns the relay on or off depending on the moisture Content of the soil.	Irrigation systems to water plants with the use of raspberry pi, Zigbee are used to control the system wirelessly. The controller node tests it with the correct soil moisture value after obtaining the sensor value.	On the off chance that dirt dampness isn't up to the necessary sum in a specific field, at that point the controller hub turn on the engine to flood the applicable field and send SMS alarm to the enlisted cell phone.
Pavankumar Naik et.al	The proposed agrarian system is planned to optimally tackle the water crisis. Implementing the Model. IoT technology uses an android computer, a main control unit (MCU), various parameter measuring sensors and a water pump to supply water to the farm.	This device is rendered as an intelligent system where user behavior, weather pattern, harvest time, animal intruders in the field and information communication can be applied by advanced technologies such as IoT in the system. After the sensor value is obtained, the controller node compares it with the right soil moisture value.	The conventional techniques of irrigation on the farmland require manual intervention. With the automatic irrigation systems, human interference can be minimized. The controller hub tests it with the right soil dampness esteem in the wake of acquiring the sensor esteem. On the off chance that dirt dampness isn't up to the necessary sum in a specific field, at that point the controller hub turn on the engine to water the significant field and send SMS alarm to the enrolled cell phone
Yuthika Shekhar et.al	The data that Arduino has received will then be sent to the Edge level processor named the Raspberry Pi3 using the second part of Serial communication. K-NN Machine learning algorithm was used in Pi3 to predict the soil condition based on the level of humidity and temperature.	This results in a full automated irrigation system using IoT technology where sensors interact with each other in predicting the condition of the soil to water the field. After the sensor value is obtained, the controller node compares it with the right soil moisture value. If soil moisture in a specific field is not up to the appropriate level, then the controller node turns on the engine to irrigate the relevant field and sends SMS notifications to the registered mobile phone.	The controller hub tests it with the right soil dampness esteem subsequent to getting the sensor esteem. In the event that dirt dampness isn't up to the necessary sum in a specific field, at that point the controller hub turn on the engine to flood the pertinent field and send SMS alarm to the enrolled cell phone.

Ranjith.E et.al	Sensor node senses the soil moisture in each field and transmits the sensed data to the controller node. After the sensor value is obtained, the controller node compares it with the right soil moisture value. If soil moisture in a given field is not up to the necessary level, the controller node turns on the motor to irrigate the specific field and sends an SMS warning to the registered mobile phone.	Water management can increase yields, improve crop quality, save water, save electricity, lower fertilizer requirements and reduce emissions from nonpoint sources. Automated farm monitoring system will analyze the data received from sensors and submit farm condition The controller node will compare it with the correct soil moisture value after the sensor value has been obtained. If soil moisture in a specific field is not up to the appropriate level, then the controller node turns on the engine to irrigate the relevant field and sends an SMS warning to the registered mobile phone.	Prototype includes mobile phone, sensor node and controller node. After the sensor value is obtained, the controller node compares it with the right soil moisture value. If soil moisture in a specific field is not up to the appropriate level, then the controller node turns on the engine to irrigate the relevant field and sends an SMS warning to the registered mobile phone.
K. Nirosha et.al	The sensing elements square measure used the square measure lightweight dependent resistance LDR sensor to point day/ night time as well as the small controller used to produce standing sunshine for the user using the GSM module, which acts as a group action half between the back and half of the hand. The Arduino board microcontroller is used as a brain to handle the road lightweight framework, wherever C Language is the programming language used to build the kit.	Road lights may be turned on during sunset or dark and off during dawn.	This clearly resolves the problem that world is facing today by saving energy very efficiently.
K.Tamil Selvan et.al	The system uses GPS-based wireless devices that make it possible to manage lamps more efficiently and also uses sensors to control and ensure optimum system parameters.	The lights are switched using IoT. The voltage used by the system is also monitored and analyzed.	Centralized and intelligent monitoring of outdoor lighting is a cost-effective and energy-efficient way to save valuable energy.
Prashanth Keni et.al	The device equipped with smart lights with visible light sensing, which, dependent on the quantity of light received, automatically switches on at the desired intensity.	If the sensed value is less than the predefined threshold, Arduino Uno switches on the relay, and if the sensed value is above the threshold, the relay will be switched off.	IoT-based lighting control monitoring and control unit is used to maintain low energy consumption, instant monitoring of defective light and light darkening under external illumination.
Bipul Kumar Talukdar et.al	The model discussed here is a cost-effective, realistic, eco-friendly and the easiest way to conserve energy and in this system, the details about the light status can be accessed from anywhere and anytime. It	A system with a self-monitoring and remote control system can be improved to some extent by a street light system.	By controlling any street light such as power loss, bulb damage and circuit issues, it is possible to identify whether the light is working or not, and to test the status of the sunlight and the artificial lamp using the LDR as

	addresses the two issues clearly the world is facing today, saving energy and also disposing of lighting systems, very quickly, initial cost and maintenance can be the models back.		a light sensor.
Supreeth SK et.al	With the Smoke Sensors, Motion Sensors, and Accelerometer sensors, the proposed animal health monitoring and tracking device was implemented in real mode. The obtained sensor values were transferred via GPRS and stored in Amazon cloud.	It is shown that the incorporation of GPS and sensors in the same micro-controller is possible without any problems and the recovered data is reliable and there is no data interference. Nevertheless, the GPS only functions when the model involves movement.	GPS is used to monitor where animals are located. Amazon cloud collects this information via GPRS and stores it in database for future use. Or that information is sent via SMS warning.
Dr. N. Srinivasa Rao et.al	Smart fencing system is designed to prevent the animals from eating the plants in the garden. The Ultrasonic sensor is fixed to the servo motor and the servo motor rotates continuously for fixed angles. This system uses a web camera.	If any obstacle occurs in any direction, the ultrasonic sensor detects the obstacle and immediately the buzzer will be alerted, and web camera captures the live video of the surroundings.	Many farmers have left the farming as their profession and have moved to daily wage laborers due to loss of crops. Old methods of fencing are not on to the point and are lacking in major applications sense.
Krishnamurthy B et.al	Solar panel is made up of a variety of silicone cells. When sunlight falls on this panel, the voltage signals are produced then these voltage signals are provided to the circuit shift. The amount of voltage produced is increased according to the size of the panel board.	When some object crosses the entrance and surrounding area then the microcontroller is given the corresponding signal. The alarm will make a sound after receiving this signal to indicate any disturbance inside the farm. Using the solar panel, the electrical supply is generated and stored in the battery and the battery will supply the fence wires.	When some object crosses the entrance and surrounding area then the microcontroller is given the corresponding signal. The alarm will make a sound after receiving this signal to indicate any disturbance inside the farm. Using the solar panel, the electrical supply is generated and stored in the battery and the battery will supply the fence wires.
Prabavathi	The issue of exploration is to establish clever protection mechanisms capable of analyzing information and transmitting data over the network to the remote region. Writing summary gives the idea of present research performed in the field of security and IoT for agribusiness. It can be improved by working with show conspire a few new developments.	The system uses basic sensors as well as computer gadgets. The tangible data are broken down taking into account the end goal of actuating electronic devices and raspberry pi is used as a server for researching information and transmitting data to the client.	This has a capacitive sensor to measure humidity. The key genuine inadequacy of this sensor is that after much like clockwork, one can literally get new knowledge from it.
Ankit D. gangani	In Smart Villages, access to maintainable vitality administrations goes about as an impetus for advancement empowering the arrangement of good training and medicinal services, access to clean water, sanitation and nourishment, the development of beneficial undertakings to support earnings, and improved security,	You must start from the creation of the village level, in which the major part of India's agriculture contributes. Agricultural property, schooling, jobs, technology and research are major concern to us.	Taking training, capacity to livelihoods and so on towns can well channelize the resources of the adolescent as an incredible. There is a restriction on the growth of urban societies that encourages the creation of urban wildernesses, where the proportion of the population per kilometer of land is a way beyond the ideal standards. First

	sexual orientation fairness and law based commitment by different mechanical methods.		of all, making infant strides will trigger a war at national level once the results of this initiative begin to bear organic goods, which would certainly be obvious for all to see sooner than expected health, ecological, financial effects utilizing various developments.
Dr. Pritesh Y Shukla	This paper explores country enhancement in creating environment for the upliftment of the rustic masses' jobs. The driving impetus behind the "Smart Village" concept In Smart Villages, access to appropriate imperative organizations is a driving force for development enabling the game plan of good management and restoration, access to clean water, sanitation and food, the improvement of gainful is that the development ought goes about as a techniques for progression, engaging preparing and close by business openings, improving prosperity and government help, overhauling law based duty and all in all redesign of nation town occupants. Presently its need of great importance is - procedure, incorporated arranging or more all observing and execution of the exercises utilizing proper administration models.	While the main goal is to smart the villages by offering basic facilities, education, activities to generate jobs, technology, etc. Mahatma Gandhi's dream-" To build up from the bottom is the easiest, fastest and most effective way. Every village must become an independent republic. This does not necessitate courageous resolutions. It takes bold, creative, smart work.	While the main goal is to smart the villages by offering basic facilities, education, activities to generate jobs, technology, etc. Mahatma Gandhi's dream-" To build up from the bottom is the easiest, fastest and most effective way. Every village must become an independent republic. This does not necessitate courageous resolutions. It takes bold, creative, smart work for all to see sooner than expected.
Gayathri Natarajan	The proposed frameworks will in the end control consequently by working during off-top vitality hours and associate with sensors to screen inhabitance; squander assortment framework, lighting conditions, and furthermore enhanced water system, the executives for those characteristics are joined. This paper will address and talk about the specialized answers for the vitality the board, shrewd water system framework and waste administration which can be embraced in the country advancement crucial.	The innovation headway in different fields of life has made a modern assistance conveyance. The point of both of these approaches in the executives' resilience is the perfect offsetting of flexibly with demand under which unwanted power outages and blackouts are annihilated. Modern equipment has to be installed in rural areas for effective implementation of the demand response technique. Mechanization in the water network is achieved with ease and high precision, reducing the water utilization.	With the growing population and lifestyle changes, cloud-based waste management is another division where current technologies can be implemented in a slowly useful manner to eliminate waste associated with cleanliness and the executives' properties. The project addresses many aspects of rural growth and architecture.
Rutuja Somwanshi	The idea of smart village is basically that of gathering collective resources and people's energy from various sources and	On the off chance that town becomes brilliant so all the activity necessities are fulfilled& individuals won't move starting	This endeavor for creating town is for government assistance of society and condition also. Brilliant town venture gives,

	then combining them with technology knowledge in order to bring benefits to the rural community.	with one spot then onto the next. The framework can lessen dependence on petroleum products and add to decrease of ozone depleting substances, for example, carbon dioxide. Vitality utilization streamlining 25-30% normal vitality sparing.	"Worldwide intends to the neighborhood needs according to Mahatma Gandhi's way of thinking and considerations.
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IV. CONCLUSION

Smart village planning can play a major role on National development. In this paper, we have discussed and reviewed various systems and techniques for smart village planning.

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