DIGITILISED SMART CLASS ROOM

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ABSTRACT: In this paper we came up with an idea to empower efficient education in rural areas such as digital class rooms, smart attendance, cloud inspection etc; using IOT. This improvises the learning skills and creates passion on education. Through this smart attendance we get point to point surveillance of attendance of students.

Keywords: smart attendance, IOT, image processing

INTRODUCTION:

Verifiably, dominant part of India still lives in towns thus the theme of provincial training is at generally significance. A review named called the Annual status of Education Report (ASER), demonstrates that despite the fact that the quantity of country understudies going to schools is rising, yet the greater part of the understudies in fifth grade can't peruse a second grade course reading and are not ready to tackle basic scientific issues. Not just this, the dimension of arithmetic and perusing further declining. In spite of the fact that endeavors are being made, they are not achieving the understudies in a correct way. In certain states participation of instructors and understudies are likewise declining.

REASONS:

These are few reasons why schools failed in rural India:

- LACK OF MONEY
- LACK OF STUDENTS / OVER PACKED STUDENTS
- IMPROPER TEACHER-STUDENT RATIO
- LACK OF PROPER ENCORAGEMENT
- NON PERFORMANCE OF TEACHERS IS DEMOTIVATING THE INDIAN EDUCATION SYSTEMS
- DIFFICULTIES OF STUDENTS IN SECONDARY SCHOOLS(i.e., more number of drop outs)
- LACK OF BOOKS
- INSUFFICIENT PROJECTS
- LACK OF PROPER TRANSPORT

SOLUTIONS:

Possible solutions to empower the education system in villages:

1. Maintaining proper teacher-student ratio
2. Improving student attendance percentage.
3. Training the teachers to new techniques.
4. Digital class rooms with advanced techniques.
5. Providing Digital library.
6. Online interactive sections with subject experts
7. Innovative project expos.
8. Providing E-CYCLES

SMART CLASSROOM CONCEPT

The savvy classroom idea has come into the writing as Internet based separation training framework; or as keen condition issued with a gathering of numerous different kinds of equipment and programming modules. During the time spent regular instructing, instructors or teachers are normally endeavoring to see whether the understudies (or progressively broad the audience members) were happy with the address, which area of the address was fascinating, which introduction procedures and techniques were more viable and alluring than the others. Past investigations have shown that around or generally following 10 minutes understudies' consideration starts to diminish. Furthermore, accordingly toward the finish of an address, understudies recall about 65% of the data exhibited in the initial ten and just around 25% of the most recent ten minutes. Coordinating the IoT innovation with the social and conduct examination, a standard classroom can be changed into a keen classroom that effectively tunes in and break down the voices, discussions, developments, conduct, and so on., so as to arrive at a decision about the instructors' introduction and audience members' delight. This will push the instructors to reliably convey great

introductions and improve an effect, while the group of onlookers or understudies will profit by fascinating addresses therefore making the general learning process shorter, progressively productive just as increasingly wonderful and notwithstanding engaging. The ongoing examination that was led at MIT (Massachusetts Institute of Technology) demonstrates that it is conceivable to consolidate PC and sociology so as to break down human conduct

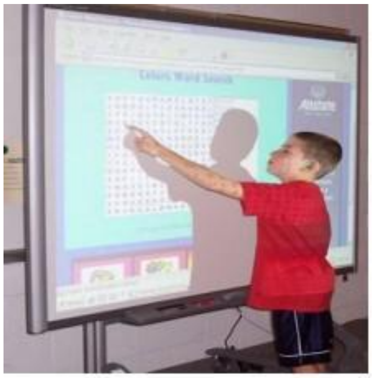

Fig 1: Smart class room concept

In our procedure comprises camera is used catching of the pictures of lecture hall image then directing pictures to picture enlargement segment. Spitting image rises identification and appreciation of the modules after the image improvement and being present noticeable at particular time to the recorder system. The experimental setup figure2 depicted. Patterns of face pictures of an single student is stored in the databank at time of registration.so the faces are then recognized from that of the image then the procedure matches with the database. The attendance marked on server if any of the face identified from the database and it can be accessed by everyone for numerous reasons. This also habits the procedure that can be used for attendance. The system is also attached with the time table unit that robotically gets class at what time and what subject. The system robotically becomes presence deprived of opinions the learners and the teachers. So teachers after coming to the class when taking attendance they just press the attendance button to start the attendance procedure. This method is highly protected method here no one can give the attendance of the other and also saves a lot of time. The presence deposited system that all right to use administrations or blood relation the learners can use for them only. The device is used to take picture that is attached to that of the system takes the pictures endlessly to identify and also to find the students those who are sitting in the classroom

.For avoidance of false recognition of images skin classification method is used .This skin classification method progresses the proficiency and the correctness that acknowledgement procedure. Mainly it is considered all other images recaps the other images then kept as black in skin classification method; it expressively improves truthfulness face tracking procedure. In the experimental arrangement show in figure1 two databases are shown. Assembling of face images and the images that are mined geographies at period procedure of registration is done by using of the face database .The data around instructors and learners.

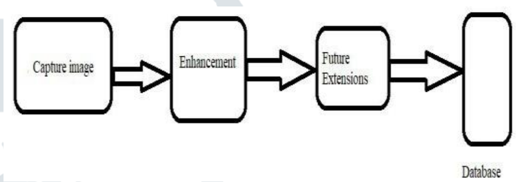

Fig 2: Smart attendance system

PROJECT DESCRIPTION

With this prototype we introduce new environment in class rooms .This promotes self learning and self discipline to the student. Through Digital classrooms students gets interest, creates passion on subject and made installation of things required for the society

By smart attendance system we can get point to point survivelance, with parents and teachers can guide the students in right way and made them to attend the classes regularly

We integrate all the solutions into a project. This project is developed by using IMAGE PROCESSING and IOT.

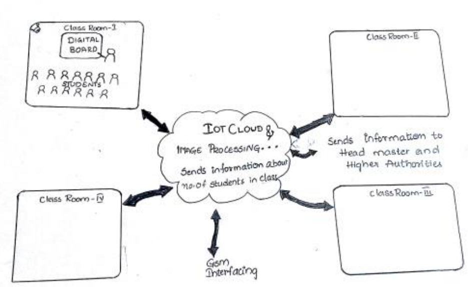

Fig 3: Modern Class Room

IMAGE PROCESSING

The brilliant classroom idea has come into the writing as Internet based separation training framework; or as savvy condition issued with a get together of numerous different sorts of equipment and programming modules. During the time spent ordinary instructing, educators or teachers are normally endeavoring to see whether the understudies (or increasingly broad the audience members) were happy with the address, which area of the address was fascinating, which introduction systems and strategies were more powerful and appealing than the others. Past examinations have displayed that around or generally following 10 minutes understudies' consideration starts to diminish. What's more, therefore toward the finish of an address, understudies recollect about 65% of the data exhibited in the initial ten and just around 25% of the most recent ten minutes. Incorporating the IoT innovation with the social and conduct examination, a standard classroom can be changed into a keen classroom that effectively tunes in and break down the voices, discussions, developments, conduct, and so forth., so as to arrive at a decision about the instructors' introduction and audience members' delight. This will push the teachers to reliably convey great introductions and improve an effect, while the group of onlookers or understudies will profit by intriguing addresses subsequently making the general learning process shorter, increasingly proficient just as progressively lovely and notwithstanding engaging. The ongoing exploration that was led at MIT (Massachusetts Institute of Technology) demonstrates that it is conceivable to join PC and sociology so as to investigate human conduct

INTERNET OF THINGS (IOT)

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GSM INTERFACING

GSM is the Global System for Mobile Communications. It is called 3G innovation. It is created to make utilization of same endorser units or cell phone terminals all through the world. A one of a kind element of GSM, not found in more established simple frameworks, is the Short Message Service (SMS). SMS is a bidirectional administration for short alphanumeric messages. Messages are transported in a store-and-forward design. For point-to-point SMS, a message can be sent to another endorser of the administration, and an affirmation of receipt is given to the sender. SMS can likewise be utilized in a cell-communicate mode, for sending messages, for example, traffic updates or news refreshes. Messages can likewise be put away in the SIM card for later recovery.

CONCLUSION:

"THE MIND IS NOT A VESSEL TO BE FILLED, BUT A FIRE TO BE KINDLED". By this, we infer that India has second biggest training framework on the planet after china. The size of activity required to guarantee nature of instruction for all in the nation is one of a kind and testing. By expanding the training rate in rustic India, India can be the main biggest instruction framework on the planet.

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