

# Robot Implementation In Education With Ai And Cloud Computing

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## Abstract:

*Artificial Intelligence and Cloud computing were the most discussed research area. Artificial Intelligence referred as AI is simply a machine with human intelligence. AI systems are mostly used in Robotics. Here we are going to Combine AI and Cloud Computing. Cloud Computing is simply a new technology which maintain data and application with the help of internet. Here we tried to give some theoretical views about the use of ROBOT in Educational field. It's not so easy to implement the idea in real time. AI systems with sensor which can be used in train to avoid accidents were also discussed here.*

accurately comparing to human. The making of Robots is expensive but if we need accuracy then forgets about cost. Here we are going to explain about Robots which can be used in Universities or Colleges. A lot of studies are going on related to Robots. Now days Robots are using in Companies for Fitting spare parts etc. In South Korea Robots are used to teach English for the students. Here we see what happens if a Robot is used in University for taking classes. ie Teachers are replaced by Robots. By using this lot of advantage and limitations are there.

**Index Terms:** Artificial Intelligence (AI), Natural Intelligence (NI), Cloud Computing, Sensors, ROBOTS.

Let SKM be a University and it contain lot of department like CSE, IT, EEE, ECE etc. Here we are using a ROBOT to teach about Operating System for CSE student.

## I. INTRODUCTION:

A usual term come under our life is Obstacles or it may be said as a Problem. Problem may be simple or Complex, but how we solve it is important. If a human solving a Problem by his own thinking we can said it as a Natural Intelligence<sup>3</sup> (NI). If we are applying some Steps or Algorithm to solve a problem with the help of a Computer we can say it as Artificial Intelligence<sup>1</sup> (AI). AI can be used in various fields like Military purpose, Medical Diagnosis, ROBOTICS etc.

## II ROBOTS:IMPLEMENTATION IN TEACHING.

The branch deals with the study and working of Robots is called as ROBOTICS. In some places human are replaced by Robots. The main reason is Robots can work hard and

The main Problem comes here for Robots are

- How it Reach the Department
- How it Reach the Classroom
- How it respond to Students Question.
- How it take Attendance for Students.
- How it avoid Students who give Fake attendance.
- How to Enter and leave the Class in Correct time.

For this we suggest we are providing few steps to solve the above problems.

Step1: First of all the Robots Should be trained well by a person who knows about the basic behavior of a teacher.

Step2: Store the Geographical Map of the University.

Eg: Store the Longitude and Latitude values of the University so as to calculate the Geographical coordinate Location of the University and the Department.

Sep3:Class Timings will be set earlier.

Eg:ie if Class starts at 10am, the Robots should start moving to the class at 9.50, so that it can reach the class correctly.

Step4: In some case the Teacher will not leave the class at time. So After reaching the class the Robots should ask “Excuse me and wait for the reply.If the reply is “Sorry for delay” then Robot can enter the Class.This can be recognized by a Voice recognition Software.

If there is no reply for 2minutes then Robot think that class is free and it can enter the class.

Step5:After reaching the class it takes attendance by reading students name.The students name and their voices are recorded early in its database.

Since Each students voice having different tones , and modulation it can easily identify the student giving fake attendance.

Step5: The Robots are set to take class for a particular subject for a particular time period.

All the data about the subject is stored in its database before it starts taking classes.

Step6:If a Student ask any doubt then it check with the stored data and if it found it reply. Else it is programmed such a way that after 2minute it say “Refer and tell you tomorrow”.

As we said earlier this system has lot of advantage and limitations .First we tell about the advantages in this type of teaching.

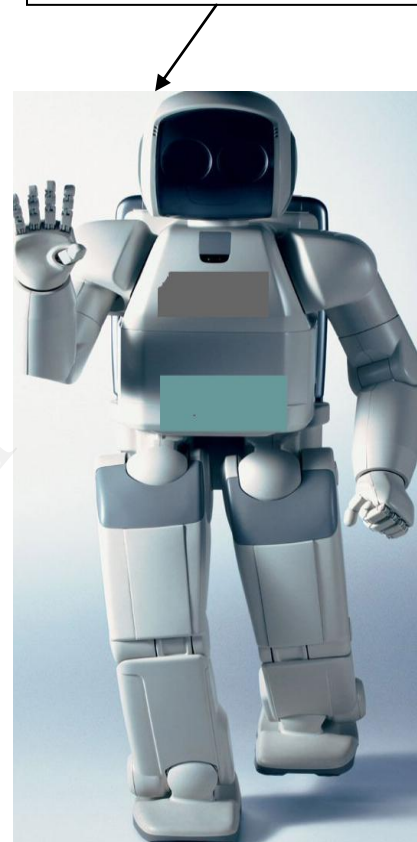
- Robots can take classes for a long time
- Lot of information can be stored.
- Easy retrieval of Data.

Some of the limitations in the system are specified here.It can also be said as disadvantage of Robots.

- Everything should be programmed earlier.

- If student ask Question beyond the syllabus then it is difficult to answer.
- Students can easily cheat Robots. ie after giving attendance students can leave the class.

Insert or Store Geographical Area of Each department, Class Room Details, Class Timings, Subject details etc



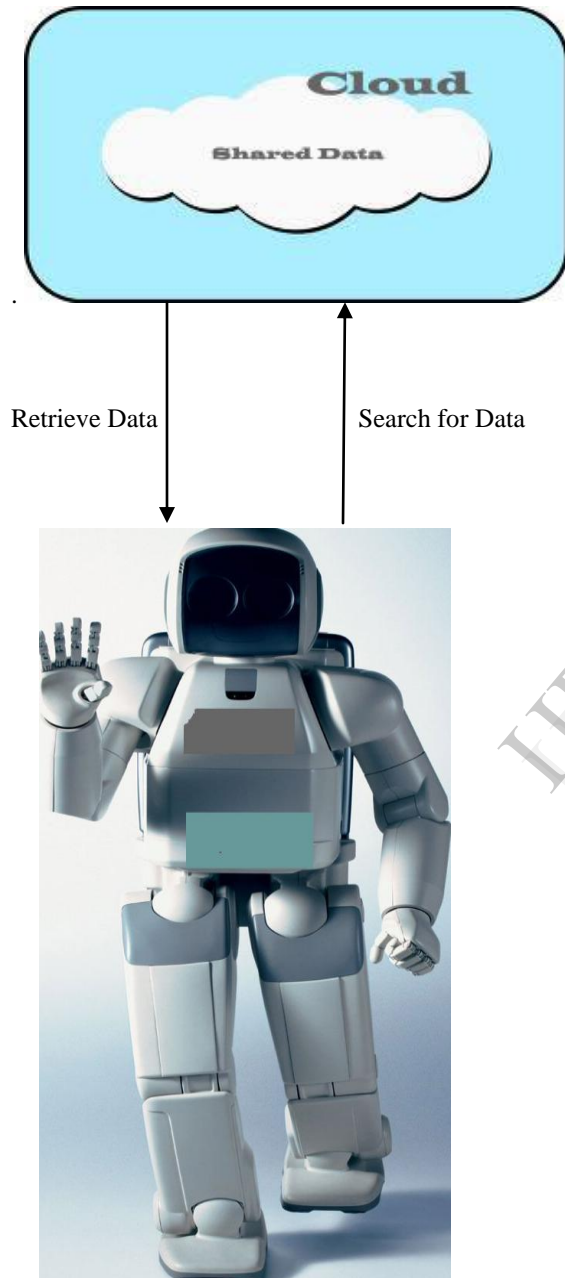
**Fig1: AI enabled ROBOT**

After some years Robots will lead the world and it will be used for almost everything.

## **II. AI with Cloud Computing: ROBOT Implementation in Teaching.**

As we explained in Section1, We can also implement the above concept of helping ROBOTS in taking classes using Cloud Computing<sup>4</sup>. We can say that Cloud Computing is simply sharing of data or resources on a network. Let think that you are storing data in your local system or in your home computer. It's not good to store

all data I your system because it makes our hard disk larger. It is also difficult to take all the data with you every time. So just keep that data in cloud system, so that it can be accessed from anywhere with the help of internet.



**Fig 2: AI enabled ROBOT with Cloud computing**

Here we are going to implement the same concept. In section1, we said that data's like Geographical area of department, class room details, Subject details etc were stored with help of human.

The main disadvantage of this system is if a student ask question beyond the stored data or subject then it is difficult for the ROBOT to answer. To avoid this it is better to use the cloud computing concept.. Here data's were placed in a cloud environment, so that data can be accessed with the help of internet. The main advantage of using this is

1. Unlimited Data can be placed.
2. Data loss is low.

IN the previous case if any problem comes to ROBOT then the data will be loss. But if Cloud computing concept is used Data loss will be minimum.

### III.AI ENABLED SYSTEM WITH SENSORS IN TRAINS.

Now a day's train accident is one of the main tragedy in our word.It may be due to lack of mistakes from the staffs. Here we are implementing a new AI<sup>2</sup> system with sensor in trains. The main advantage by using this is,

- It can easily detect any problems in Railway track. For that a sensor is used .the sensor can detect any problems in track for One km .If any mismatches seen then t is reported to the corresponding official by sms and the train stops immediately.
- It can also be used to avoid accident usually occur when two train coming in the same platform.

### IV.CONCLUSION:

**Here** we discussed about our theoretical view on

- 1)How ROBOT can be used in Educational field
- 2) Combining AI with Cloud Computing.
- 3)Use of AI enable system with sensor in Train.

We all Know that both AI and Cloud Computing were vast field. Research is going on for making a ROBOT which can be used in various fields. In some places like South Korea ROBOT are used to teach English

for school .We can combine Cloud Computing and AI in many areas. Our theoretical view about ROBOT will be implemented in real time after few years.

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