

# Internet of Things (IOT)-A Smart Solution To Run The college Management Information System

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## Abstract

The Internet of Things (IoT) is a collection of interconnected physical devices that can monitor, report on and send and exchange data. IoT devices are typically connected to computer systems via data or Wi-Fi networks.

This paper is emphasis on the college management information system. Now a days almost all the education institute are maintaining software to maintain the big data of the institute for the implementation of e-governance in areas of operation like, planning and development, Administration, human Resource management system, finance and accounts, students admission and support, examination and Library management. The Internet of things is play major role to maintain such kind of system in effective manner.

Key Word: - IOT, Smart solution, Application of IOT, Management Information System.

## Introduction

Internet of Things (IoT) is a network of Internet connected devices, sensors, and computers. In the literature, IoT is defined as follows: "The Internet of Things allows people and things to be connected Anytime, Anyplace, with Any- thing and Anyone, ideally using Any path/network and Any service" IoT devices are increasing in numbers day by day. U.S. National Intelligence Council states that "by 2025 Internet nodes may reside in things that we use every day, food packages, furniture, paper documents, and more". An IoT ecosystem consists of web-enabled smart devices that use embedded systems, such as processors, sensors and communication hardware, to collect, send and act on data they acquire from their environments. IoT devices share the sensor data they collect by connecting to an IoT gateway or other edge device where data is either sent to the cloud to be analyzed or analyzed locally. Sometimes, these devices communicate with other related devices and act on the information they get from one another. The devices do most of the work without human intervention, although people can interact with the devices -- for instance, to set them up, give them instructions or access the data.

The connectivity, networking and communication protocols used with these web-enabled devices largely depend on the specific IoT applications deployed.

Education is not yet among the most common IoT applications. Students, teachers, parents, and other stakeholders are wary when it comes to implementing connected e-learning solutions.

However, as the Internet of Things platforms become more widespread and cheaper to adopt, campuses, schools, and other institutions are leveraging the technology's potential. From improving campus attendance to ensuring in-class productivity, IoT has dozens of promising applications in education. We will examine the IoT trend for education in detail in this post.

### **Application of IOT in e-governance**

Now a day every school and colleges has maintain their data base in computer with the help of some application software. That data can be utilized for future action and for various uses. The various colleges has maintain ERP software wherein they are use the module like Administration, Human Resource management , Finance and accounts, students admission and support, examination and library management, planning and development

### **Planning and Development**

This possible with the utilization of IOT system. The data are available in the system can be utilize to do the well planning for the future development and decision making process in the benefits of the organization. This can be possible only because of application of IOT in education system.

### **Administration**

IoT platforms have become an essential part of the IoT stack. They find their roots in, among others, the need to manage, monitor, store, secure and analyze IoT data (with a growing role for artificial intelligence), the enablement of applications (with a growing focus on vertical applications and open source), IoT device management, the lack of standards and interoperability with related gaps in a broader IoT perspective whereby they serve as a bridge to close those gaps as Nicolas Windpassinger explains in his IoT book, and the tackling of several IoT roadblocks. IoT platforms integrate several capabilities and features into a solution, essentially enabling to deploy IoT projects and develop applications in a better, faster, more cost-efficient and integrated way, at the same time serving as a bridge, middleware and solution to overcome IoT issues in enabling these applications and ultimately outcomes.

### **Human Resource Management**

The rise of Internet of Things (IoT) technologies have immensely facilitated the organizations to connect, track and even measure everything that can be connected, tracked and measured whether it is machines or humans,into the world of digital work environment. Internet of Things (IoT) ecosystem will influence organizations not only to deal with products and gadgets that are brought by the companies to the market, but

also to establish connections and partnerships to recruit employees especially “GenMobile” who are generally mobile app-driven job seekers. Internet of Things (IoT) ecosystem enables an organization to effectively handle internal Human

Resource Information Systems (HRIS), Payroll function, Workforce management systems by establishing adequate data security and privacy measures.

### **Monitoring Employee Experiences**

Internets of Things (IoT) ecosystem in an organization enable the concerned decision makers to make appropriate managerial decisions to benefit organizational growth with the availability of easy and cost-effective accumulation huge amount of employee related data. Internet of Things (IoT) helps to attach sensing machines practically to everything form coffee machines to employees and thereby every aspect of employees’ experiences can be observed varying from their movements, behavior, emotions etc., Thus, Internet of Things (IoT) enables managers to capture and analyze employee related data and to formulate appropriate policies/ programmes so that crucial decisions be made to enhance employee productivity in an organization.

Hence, analysis of data captured through Internet of Things (IoT) helps the organization to make better decisions thereby eliminating the drawbacks of decisions taken based on human intuition which may be flawed but a well-intentioned one

### **Finance and Accounts**

An ecosystem is a useful metaphor for thinking about the IoT, and the term was frequently used by our interviewees. Ecosystems were discussed both in the sense of the IoT as a technology platform and the interrelationships between people, organisations and institutions involved in the IoT. Picturing the IoT as an ecosystem helps us consider the breadth and complexity of the relevant relationships which are often non-linear and multifaceted. For example, as the number of devices grows, data bandwidths improve and costs come down, the volume of data expands, which enables advances in artificial intelligence.

However, the pace of growth is constrained by factors such as a lack of people with the necessary skills and fragmented technology standards.

Accounting for ecosystems is in its infancy, with its focus remaining on individual entities. There are accountings rules for legal structures such as joint ventures, and some organizations use open-book accounting to help with supply chain management. However, working out how to account for the value in less formal and more complex relationships requires significantly more work. Such work is important to help organizations decide how to participate in the ecosystem and what value is being realized through such participation.

## **Students Admission and support**

Every management has maintained the ERP software to maintain the data. In every institution first procedure started from admission. The first entry of student's data has been enrolling into the college system through student's name, address and education details, stream of education, fees structure and many other details could be possible to maintain the correct and system manner with help of software only. The code is generated with help of IOT in the computer system to find out the details of the students

## **Examinations**

Standardized exams are considered an objective way to assess students' skills and competencies. The reality is, such assessments are not immune to bias and do a lot to promote inequality at educational establishments. In '34 Problems with Standardized Tests', The Washington Post emphasizes the impact of the following issues standardized testing brings forth: Those who can afford test prep classes typically have higher scores; Tests don't offer classroom teachers much relevant feedback on the way students learn and process information; Standardized exams don't promote creativity among students, encouraging sticking to tried-and-true patterns instead; Exams are conducted under unreasonable pressure that often affects a test taker's performance; High, potentially life-changing impact of failure.

## **Library Management**

IOT and library management system have correlation between them. Library consist of huge books and its management can be possible only the effective use of IOT system. With the help of Library management software the issue off books to the students , enrollment of students, record maintenance of students, list of huge books to be maintain with help of IOT .when books issued to the student and return can possible with use of software only. To store the huge data in the form of eBooks can be possible only through IOT.The eBooks stored in the computer and can sent to the students and faculties online. The efforts can be saved.

## **Security cameras and video conferencing**

Now days it is mandatory to installed the security system in every institution to maintain the safety and security of the students, faculties staff members and property of the institution. And IOT do a miracle to maintain this system.

## **Biometric Attendance tracking**

It is mandatory requirement of regulatory body to maintain the students and staff biometric attendance system.

## Conclusion

IOT is the better option to maintain wide range of data in institutions and organization.

The information can be utilized for decision making process.

Information is utilized for future course of action.

All the numbers are available easily to access the data.

Everything will get on fingers within fraction of second.

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