


## Research Article

# The Classroom Education Model of Artificial Intelligence and Information Technology Supported by Wireless Networks

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Multimodal is one of the methods of teaching or ideas formed from a different set of models and teaching content to enhance the student's experience in their field of study. This method can be implemented in various scenarios, such as video lessons, interactive elements, and a list of questions. Teachers should have enough ideas to cover students in all the categories. The students have to listen to the courses through an online learning platform or a live session. This proposed work focuses on multimodal teaching and learning concepts combined with wireless sensor networks and AI. Additionally, the implementation of technology in classroom education is being done to handle the multimodal data. This idea is implemented with the Random Offloading Algorithm which works based on the multiagent system. This multiagent system is implemented for optimizing the user's response delay and hence balancing the effective resource allocation of the server. The main role of this Random Offloading Algorithm in the proposed system is to focus on the online classes for the students through wireless network and to make effective response to the student's queries. The proposed system is later compared with the existing ANN classification model. The results show that the proposed algorithm has provided 98.99% accuracy in providing better classroom education.

## 1. Introduction

It is an exciting moment to be a scientist or a technologist, and the field is expanding rapidly around the world. The application of artificial intelligence during the Industrial Revolution is resulting in a completely new generation of human-machine cooperation and intelligence exchange (AI). In the field of education, artificial intelligence (AI) has had a significant impact on how students are taught and educated. The researcher has evaluated the effect of mobile learning in the optimization of preschool education teaching mode using artificial intelligence technique [1]. Intelligent classrooms are becoming increasingly widespread in music instruction as a result of advancements in artificial intelligence (AI) technologies. Students can learn how to conduct their own research in the classroom while also having a good time thanks to technology in the classroom. With the development of wireless networks in recent years, it is now possible to construct smart classrooms [2]. When stu-

dents have the opportunity to use current technology, such as tablets and PCs, they become more interested in their studies.

Students are educated in a different way while they are in an intelligent classroom. Teaching approaches in the classroom are being augmented by the use of technology [3]. It intends to improve students' academic performance by providing them with a setting in which they may study more comfortably. According to a review of the literature, there have only been a few prominent studies on intelligent classrooms conducted in China. Some researchers have created the word "smart classroom" to define the use of all available technology tools and resources to build a highly intelligent learning environment based on artificial intelligence, big data, virtual reality, cloud computing, and other technologies [4]. Through the intelligent classroom, it is possible to meet the needs of teachers while also providing students with a favorable learning environment. Educators in China are paying particular attention to the intelligent classroom,

which is playing an increasingly significant role in today's learning environment [5]. New research into intelligent classrooms and subject teaching is laying the theoretical groundwork for the future of education as we know it. In China, only a few studies have been conducted on the usage of intelligent classrooms, and topic-related research is still in its infancy in the country. Before now, there has never been a study of artificial intelligence and music instruction conducted in conjunction [6]. In middle school music lessons, artificial intelligence-based teaching methods are now being developed. Following that, the educational impact is rigorously documented and researched. This research has a great deal of practical value because it will help to meet the requirements of the new course idea [7].

Keeping up with technological advances is critical in the field of music education, which is one of just a few places where this is true. As a result of the incorporation of mobile internet and wireless network technology into classroom instruction, students can learn and progress at their own pace [8]. Massive data sets, artificial intelligence, and virtual reality are altering how people study on the internet today (VR). Students in the subject of music education today are required to participate in an online learning community and use a fully automated system, among other things [9]. There is a micro course with additional instructional content that is based on micro resources that are made available via online education. Evaluations of learning outcomes are incorporated into the instructional framework and activities [10]. The goal of a micro class is to teach or study a single piece of information through the use of a brief online video. It is recommended that online courses have a clearly defined educational aim and be no longer than 10 minutes in length [11]. Talha developed two-dimensional wisdom models for the examination of the relationship between music wisdom and five important elements of music signals, specifically the elements of melody, rhythm, loudness, spectral centroid, and texture. During that time period, both the number of researchers and the scope of their studies in this field have increased [12]. Talha and colleagues developed a smart vector space model to predict smart label information in music. Then, using a support vector machine to gather songs from the same genre, it is possible to design an algorithm for reproducing all of the music in the genre [13].

To detect hidden musical signals, it is usual practice in the field of online music education to first extract and analyse the physical characteristics of the music before employing machine learning to uncover them. The physical features of music are influenced by several factors, including time, frequency, and the cepstrum properties [14]. Aspects of the spectrum such as the spectral centroid, the spectral roll-off, and the spectral roll-off point are all frequency-domain characteristics, whereas PLPCC is a time-domain characteristic. The MFCC and PLPCC are two types of cepstral features that are distinct from one another. A PLPCC is a property that exists in the time domain. There are two cepstral characteristics: the MF and the PLPCC [15]. The information unit mixing approach was developed by Erban and Todericiu to automatically classify musical intelligence in order to improve efficiency (ICMM). A three-semantic

tuple's structure is shown in the diagram below. ICMM is founded on fuzzy conceptions, which makes it particularly well-suited for describing complicated, multidimensional concepts [16]. The International Conference on Machine Learning (ICML) may be beneficial for both unsupervised and supervised learning, according to the organisers. According to several experts, the most effective way to grasp musical intelligence is through the application of a two-tiered classification scheme. Wrath, joy, and melancholy are the four types of musical wisdom to which we can refer. It is possible to utilise a support vector machine to construct models for four alternative wireless network configurations (SVM). This strategy can be implemented in a class setting, such as the calm one [17]. For each test sample, the multi-layer wireless network model predicts four different values using a probabilistic approach. The use of smart music online training that is focused on content has been shown to be beneficial.

A variety of instructional designs, forums, courseware, and other learning materials, as well as feedback from students and expert opinions, are used in online learning environments [18]. Micro video is the foundation of the system. Collective problems can be handled by employing a large number of interconnected processing units, known as neurons, to solve them, says the author. An artificial neural network (ANN) must be trained before it can perform pattern recognition or data classification in order to meet the requirements of various neural wireless network models [19]. Using an online learning platform, you can organise a large amount of data into smaller chunks and courses that are easier to manage and keep track of. By connecting and collecting knowledge points, it is possible to create an effective music knowledge system structure for online education that may provide a wide range of retrieval services, such as classification, topic keywords, and mind mapping [20]. Identifying the best feasible categorization. The hyperplane in the data input or high-dimensional feature space is a crucial component of the process of developing wireless networks. It is possible to generate a hyperplane of this type by employing a succession of labelled training data sets (whether in the input space or high-dimensional feature space) [21]. In order to address a nonlinear problem, wireless networks employ the kernel function to turn the input space into a high-dimensional feature space. Preparation for class should begin with viewing the video the day before. As a result, they will be able to strengthen their oral communication and conversational skills in the classroom. The basic purpose of data governance is to bring value to the organisation [22]. The availability of high-quality data is vital for demonstrating the importance of data. As a result of these ideas, we have developed a value-oriented data programme for music curricula that consists of five key activities: data integration and cleaning, continuous development of data quality, relational combing (data mining), forecasting, and visualisation [23]. Using data governance operations as a framework for making business optimization decisions, just as other college and university business activities offer the data, it is possible to make decisions regarding business optimization [24]. To construct a "smart classroom," an internet infrastructure

consisting of “cloud + network + terminal” is employed in conjunction with other technologies [25]. The study focused on the classroom education model of artificial intelligence and information technology supported by wireless networks.

*1.1. Motivation for the Study.* Based on student responses and information from classroom evaluations, the enhancement of student learning evaluations is examined using machine learning with collaborative filtration technology. Enhancing both teaching and student outcomes is required. A random offloading strategy, according to data analysis, would provide an optimal assessment method, enhance the integrity of the students’ learning, and boost the efficiency of student classrooms. A set of variables has specific components that contribute to the solution of a complex problem. It, too, is constructed on a fibreglass framework, with components prioritised in order of relevance at each level, particularly in comparison. Finally, the strength of each relevant index is calculated in the decision-making issue it is used to Student Academic Performance dataset.

## 2. Materials and Methods

*2.1. Dataset.* It is Student Academic Performance dataset gathered from the Kalboard 360 learning system (LMS). Kalboard 360 is a multiagent LMS that was created to facilitate learning by utilising cutting-edge technologies. This type of solution gives consumers simultaneous access to instructional information from any device connected to the internet.

The data is gathered with the use of a learner fitness app tool known as experience API (xAPI). The xAPI is a component of a teaching and growth architecture (TLA) that allows for the tracking of student learning including actions such as reading a report or viewing a training video. The experience API assists learning activity suppliers in determining the student, activity, and all objects that comprise a learning experience.

The education system is the only thing that is common for all humans. It is one of the most unique fields to develop a person’s quality and mentality. There are no more limitations to restricting the level of education systems. It plays a significant role in all such fields. Until 2019, there were no ideas about online teaching. Still, within the last two years of technological growth, many improvements have converted the entire world’s people to learning without blackboards. Mobile applications are developed to conduct online courses that connect the students and the teachers wherever they go. The education system and the e-commencing field are also in the top range using internet facilities. While developing an online-based curriculum, if the recordings are made through audio or video call, they should not last more than 10 minutes. Making a student attentive in an average classroom for more than 30 minutes is the most challenging thing. In that case, holding the student’s mentality for more than 10 minutes using the online application is impossible. Here, the learning module is installed with instructions and default operating methods. They could start working on it by following the teacher’s and students’ mentality.

Teaching is one of the standard methods and focuses mainly on audio-based systems. Only the ML algorithm is used to bring the analysis and subsequent process of characteristics into such an application. This method is most commonly used to create a more straightforward method for learning mechanisms. While listing out some of the significant features, they include maintaining the time domain, caring for the level of frequency, an autocorrelation function that works under a short-term process, and finally the coefficient of spectral prediction rate. Typically, supervised learning is the concept of gathering all the words that make up a sentence. It means executing the terms or observing practical knowledge through projects, tasks, or activities that give the correct output. Here, supervising does not mean by the control lance of a human; it focuses only on the machines through the concept of machine learning. In such a case, there are a few classifications in the supervising of a device; for example, first, the teacher would fill up the model with enough data that is related to the course, and this would help the student or the listener to make future predictions that are associated with the particular field. Most commonly, the data used here should have a separate label; it can only be said to be supervised learning. Furthermore, the unsupervised learning method is a bit opposite to supervised learning.

Figure 1 depicts the basic model for classroom education for any course. In this classroom education model, artificial intelligence techniques are utilised to automate the process and improve the visualisation of the remote data. Wireless sensor networks are utilised in classroom education to increase the ease of accessing remote data with end-to-end delivery with high throughput. In this research, it is assumed that the network connection is stable between the user and the server. The prerecorded videos are made available in the data stack that aids in the autoplating of the course materials with the aid of an intelligent system.

A student has disrupted the original traditional teaching and learning order in schools and colleges. Colleges and universities must investigate a new method of teaching restructuring that combines student and offline instruction to meet the Ministry of Education’s requirement of “stop teaching without stopping.” The goal of analyzing the pre-school reform process in the context of online learning through integration system is considered in this research. In the professional classroom teaching, teaching research methods requires a unique and also silent education features. Educational materials include good network infrastructure, professional educators lag in the desire to investigate the current scenario and improve the preschools. Professional student and offline education resources are integrated to practice and study, and attemptsz to promote the education for students specialized.

Dynamic is among the teaching approaches or ideas that combine a variety of models and teaching content to improve the student’s experience in their field of study. This strategy can be used in a variety of circumstances, including video courses, interactive features, and a list of questions. Teachers should have adequate ideas to cover all of the areas for their students. The courses must be listened to by the

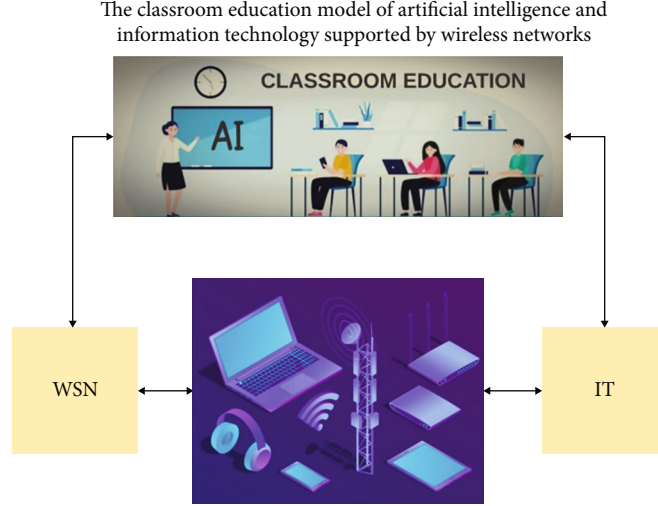


FIGURE 1: Online learning integrating system.

students via an online learning platform or even a live session. This proposed effort focuses on multimodal learning and teaching principles in conjunction to wireless sensor networks with artificial intelligence. In addition, technology is being implemented in classroom education to handle multimodal data.

$R$  represents the edge domain controller that offers computational services to  $X$  terminal equipment, and  $G$  represents the collection of connected devices:  $h = \{h_1, h_2, \dots, h_3\}$ . Assume that each connector device  $h_i$  only wants to handle one task  $v_i$ , and that the triple is used to represent  $v_i$  as  $\alpha_i = \{c_i, \sigma_i, \dots, v_i\}$ , where  $m_i$  represents the size of information task data,  $h_i$  represents the size of calculating result data, and  $X_{i,R}h^{-v}$  represents the task's information technology load.  $R$  denotes the total frequency response assigned to every device. The goal is to collect a set of task computer power decision-making for a single student classroom education process by reducing overall task computer technology and also interaction latency.

When carrying out tasks, the command prompt device makes use of both the entry point and also the available frequency band for data transfer is given in the Equation (1), and the internet access transmission is calculated with the variable  $h_i$ .

$$v_i^c = \alpha_i R \log \left( 1 + \frac{|h_{i,R}|^2 X_{i,R} h^{-v}}{\sigma^2} \right), \quad (1)$$

where  $i$  is the percentage of internet access bandwidth is occupied by artificial intelligence (AI) technologies in terminal posting new tasks,  $h_{i,R}$  is the connection downturn multiplier between entry point and also terminal,  $X_{i,R}$  is terminal items but also services,  $h$  is central line station spacing,  $v$  is newscaster loss, and  $\sigma^2$  is connection sound strength. Similarly, the efficiency of  $h_i$  data link data transmission is described as Equation (2).

$$v_i^h = \beta_i R \log \left( 1 + \frac{|h_{R,i}|^2 X_R h^{-v}}{\sigma^2} \right), \quad (2)$$

where  $\beta_i$  denotes the percentage of signal strength bandwidth occupied by command line receiving tasks,  $h_{R,i}$  denotes its link economic downturn correlation between entry point and terminal, and  $X_R$  denotes the transmission rate of the base network.

The goal of artificial intelligence (AI) technology  $p_i$  optimizing an edge device-based student classroom education system is to obtain the task information system offloading system with the smallest time delay, which comprises of two: computing technology time delay only on local and also the frame server.

If task  $y_i^l$  also is not unloaded to the a network edge  $f_i^m$ , it is also approximated on the terminal. The time lag between executing duties locally is signified as Equation (3).

$$y_i^l = \sum_{i=1}^m \frac{p_i}{f_i^m} + \frac{|h_{i,R}|^2 X_{i,R} h^{-v}}{\sigma^2}, \quad (3)$$

where  $f_i^m$  denotes the ability of the terminal  $h_i$  data processing to manage duties locally. As a consequence  $\sigma^2$ , the average time latency identified by  $Y_i^m$  researchers just at local level is evidenced as in the succeeding Equation (4).

$$Y_i^m = \frac{|h_{i,R}|^2 X_{i,R} h^{-v}}{\sigma^2} + \sum_{m \in G} (1 - \alpha_i) y_i^m. \quad (4)$$

Unless delegated to with an edge server, task  $k_i$  is determined by calculating on that server. The time delay of executing duties on edge servers is affected by internet connection data transmission, transmit power transfer time  $(1 - \alpha_i) y_i^m$ , virtual machine computation time, but also high bandwidth link time. As a result of the workstation but also web service being wired together, its high bandwidth

connection time is ignored. The uplink delay time is comparable to the magnitude of the uploaded new data and also the uplink communication for the artificial intelligence (AI) technology bandwidth, as shown in Equation (5).

$$y_i^c = \frac{o_i}{v_i^c} + (1 - \alpha_i)y_i^m - \frac{|h_{i,R}|^2 X_{i,R} h^{-\nu}}{\sigma^2}. \quad (5)$$

The frequency band delay time is relative to the quantity of received data and also the available bandwidth for data transmission, as demonstrated by artificial intelligence (AI) technologies using the following Equation (6).

$$y_i^h = \frac{q_i}{v_i^h} + (1 - \alpha_i)y_i^m - \frac{|h_{i,R}|^2 X_{i,R} h^{-\nu}}{\sigma^2}. \quad (6)$$

The calculation time of a server is comparable to the magnitude of a certain stand and the user's computational power, as demonstrated by the following Equation (7).

$$y_i^p = \frac{p_i}{f_i} - (1 - \alpha_i)y_i^m + \frac{|h_{i,R}|^2 X_{i,R} h^{-\nu}}{\sigma^2}. \quad (7)$$

As a consequence, the time spent unloading assignment  $k_i$  to the end devices is conveyed in Equation (8).

$$y_i^n = \sum_{i=1}^n y_i^c + y_i^h + y_i^p + \frac{p_i}{f_i} - (1 - \alpha_i)y_i^m. \quad (8)$$

As a result,  $\alpha_i$  the time duration associated with the work of offloading  $y_i^n$  to edge device is demonstrated as in Equation (9).

$$Y_i^n = \sum_{i=1}^n \alpha_i y_i^n + \frac{p_i}{f_i} - (1 - \alpha_i)y_i^m. \quad (9)$$

An information technology unloading system is required for learning dynamic resource to minimize time latency of performing tasks in a student classroom education system texture analysis is provided in Equation (10) as a trending computer technology.

$$\min Y = \sum_{i=1}^Q (Y_i^h + Y_i^n) + \sum_{i=1}^n \alpha_i y_i^n. \quad (10)$$

The scheme problem is modelled as an s.t.P1 optimization process of artificial intelligence (AI) technologies with time latency as the metric. The  $f_i \leq f_m$  optimization method is described in Equation (11).

$$\text{s.t.P1} : \sum_{i=1}^n \alpha_i y_i^n + \sum_{h_i \in G} f_i \leq f_m. \quad (11)$$

In schools and colleges, a student has disrupted the original traditional teaching and learning order as given in Equation (12).

$$\text{P2} : \sum_{h_i \in G} \alpha_i \leq 1 + \sum_{h_i \in G} f_i \geq f_m. \quad (12)$$

To  $\beta_i \leq 1$  meet the Ministry of Education's requirement of "stop teaching without stopping," colleges and universities must investigate to describe as in Equation (13).

$$\text{P3} : \sum_{h_i \in G} \beta_i \leq 1 - \sum_{i=1}^n \alpha_i y_i^n. \quad (13)$$

A  $\alpha_i y_i^n$  new method of teaching restructuring that combines student and  $\forall i \in G$  offline instruction is represented in Equation (14).

$$\text{P4} : \sum_{i=1}^n \alpha_i y_i^n + f_i^m \geq 0, \forall i \in G. \quad (14)$$

Because the goal is  $Z_i$  to reduce its time delay of an energy system, appropriateness is described in terms of  $Y_i$  time delay,  $\sum_{i=1}^n \alpha_i y_i^n \geq 0, \forall i \in G$  but also lower time latency correlates to higher athleticism. The strength training value is calculated as in the following Equation (15).

$$Z_i = \sum \frac{1}{Y_i} + \sum_{i=1}^n \alpha_i y_i^n \geq 0, \forall i \in G. \quad (15)$$

Following that, during next generation of evolution, the algorithm recognises individuals focusing on a particular strategy. Individuals are chosen to use the game show method, and their chances of being chosen are directly related to their optimization method, as demonstrated by Equation (16).

$$X_i = \sum_{i=1}^G \frac{Z_i}{\sum_{i \in G} Z_i} + \alpha_i y_i^n \geq 0, \forall i \in . \quad (16)$$

### 3. Results and Discussion

In total, there really are 365 occasions and 34 attributes. G3 is the output sticker. In other words, with the exception of G3, each one of the 32 attributes is an independent factor that anticipates the variable, G3. The range of G3 is [0, 22]. With only 365 instances, it would be challenging for a classification method to predict one of the 22 different class labels. It appears that in sequence for classification artificial intelligence (AI) methods to perform reasonably well, the number of different classifiers should be reduced.

The initial target output class varies from zero to 22, and there are 23 clusters (see Figure 2). This is another irrational setting for the classification task because it makes classification extremely difficult to remember and have only 365 instances. As a consequence, as shown in analysis in Table 1, a few clusters to the group of groupings are assigned. As a result, the supervised classification has become feasible.

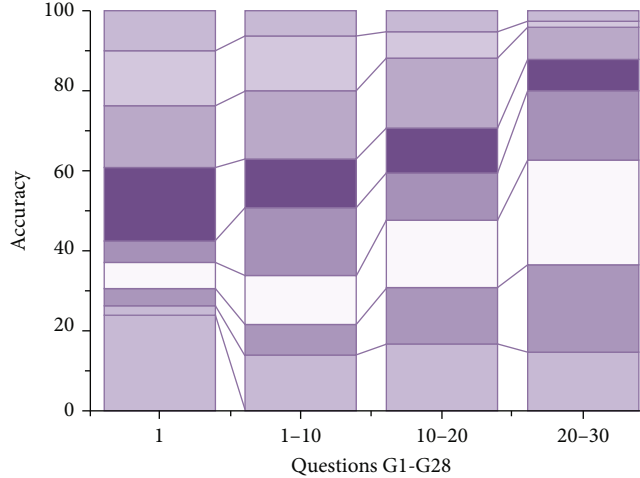


FIGURE 2: Performance Analysis for Score Correlation Q1-Q28 classroom education using artificial intelligence technology supported by wireless networks.

TABLE 1: Number cluster of target class.

Range of initial class	New cluster number
0~6	1
7~11	2
12~16	3

To prove task scheduling, a gathering is used to depict task computer engineering offloading decisions, as  $h = \{h_1, h_2, \dots, h_n\}$ , where  $g_i = 1$ . If  $h_i$  is greater than just one,  $h_i$  sends  $v_i$  to an angle AI server for processing; otherwise,  $h_i$  processes  $v_i$  locally. Figure 2 shows that G1 and G2 have such a strong correlation to G3, and I hypothesized that it might be possible to get a good enough result using only G1 and G2. As just a result, it was assumed that trying to remove the anomalies from the G1 vs. G3 graph would help with classification which is represented in Figure 3. However, removing its outliers here on G1 vs. G3 graph led to a significant loss of detail, as shown in Table 1. This proved that Eigenvalues may not have been important in predicting G3.

This segment is aimed at identifying artificial intelligence (AI) classification techniques, recognising which work much better than the others, choosing the most complex technologies, where  $i$  is the percentage of internet access bandwidth occupied by terminal posting new tasks,  $h_{i,R}$  is the connection downturn multiplier between entry point and also terminal,  $X_{i,R}$  is terminal items but also services,  $h$  is central line station spacing,  $v$  is newscaster loss, and  $\sigma^2$  is connection sound strength and then further refining one's properties to achieve generalisation accuracy in necessary to pick the optimum solution classifier algorithm(s) to generalize the data. This should be mentioned that validation data was used to calculate all accuracy (refer to Figure 4).

Unless delegated to with an edge server, task  $k_i$  is determined by calculating on that server. The time delay of executing duties on edge servers is affected by internet connection data transmission and transmit power transfer

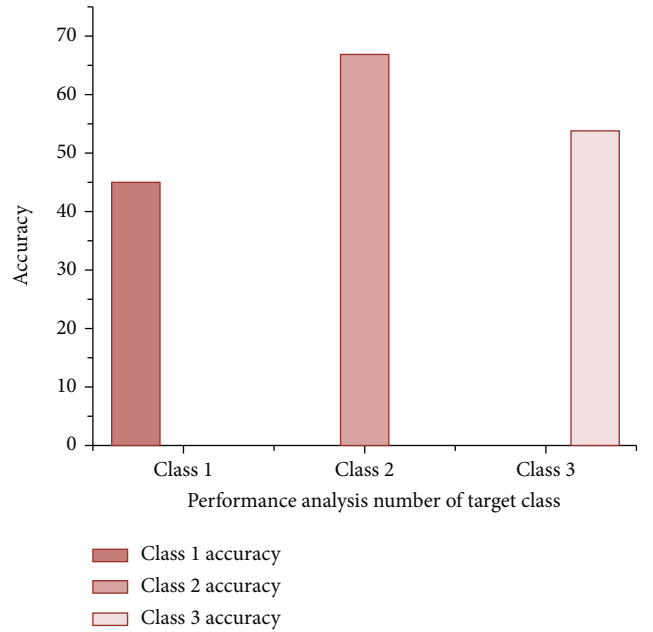


FIGURE 3: Performance analysis class classroom number of target education using artificial intelligence technology supported by wireless networks.

time  $(1 - \alpha_i)y_i^m$ , and based on this, retrieve Figure 5. With  $k = 1$ , the accuracy was 45.35%, and it will not improve far after  $k = 4$ . Because  $ut$  (at  $k = 1$ ) is comparable to linear regression and zero  $R$ , it is comprehensible that almost all three techniques produced similar results (i.e., accuracy within 40.43 percent). After trying to remove all unimportant attributes and running  $k$ -nearest neighbor ( $k = 1$ ), with five most significant attributes, the accuracy is improved to 77.16%.  $k$ -nearest neighbor was indeed higher at  $k = 10$ , at 77.26%, which is tabulated in Table 2.

The framework performed consistently well regardless as to how numerous and also which attributes were used. The precision ranged from 84.31 to 85.37%. This increases the

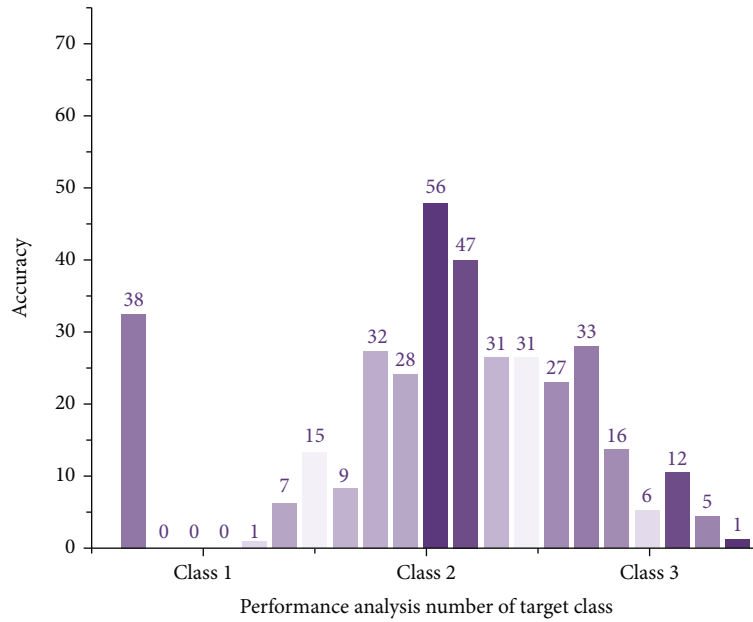


FIGURE 4: Performance analysis class classroom number of target class education using artificial intelligence technology supported by wireless networks.

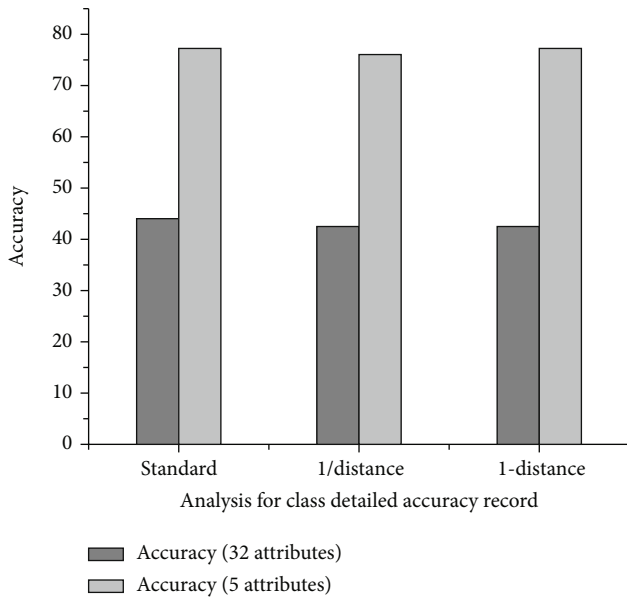


FIGURE 5: Analysis for class detailed accuracy record.

TABLE 2: Result analysis for detailed accuracy analysis for attributes record.

	Accuracy analysis (32 attributes)	Accuracy analysis (5 attributes)
Standard	45.35%	77.16%
1/distance	43.73%	76.92%
1-distance	43.73%	77.26%

TABLE 3: Performance analysis for the number of score and analysis for accuracy.

Score	Accuracy (%)
1	84.34
2	84.34
3	84.62
4	84.63
5	84.65
10	84.65

score to see if it was scope for improvement is represented in Table 3.

At the present time, control and prevention are more common, and online student learning will be a new variant of instruction. Through in this early analysis of student learning, the system learning structure wants to break through the constraints of the classroom, classroom time space, but also information exchange and improves the implementation capacity of teaching staff to network information artificial intelligence technologies but also technical applications. Instructors start moving classroom displaying assets, collaborate with students online, and assess students' internet-based ability learning processes. The communication is demonstrated more multidimensional format, and also the understudies' class scenario will aid in the shaping of data for teachers to get participated and make the class cooperated. From the accomplice participation to students, to understudies' revenue in learning competent information but also expert skills, will get improved significantly.

Machine learning and collaborative filtration technology are being used to improve student learning assessments based on information from students' classroom evaluations and student answers. It comprises enhancing teachers'

TABLE 4: Comparison result analysis with existing method.

Algorithm	Classroom training education (%)	Classroom testing education (%)	Accuracy (%)
Random offloading algorithm	89.93	92.43	98.99
Existing method ANN classification	84.34	89.93	95.34

teaching and learning performance and students' learning performance. Based on the findings, implementing a random offloading artificial intelligence technique would improve evaluation methodology, student learning integrity, and increased classroom efficiency. A variable set comprises distinct components that help solve a complex problem. It is also based on a classroom model, with elements prioritised in importance at each level, notably in comparison. Finally, the decision-making problem determines the strength of each important index. Table 4 provides the comparison for the existing method training (84.34%), testing (89.93%), and overall accuracy (95.34%) for the classroom student education. Also, in the proposed Random Offloading Algorithm, the training (89.93%) testing (92.43%) is provided the overall best accuracy (98.99%) result for student's classroom education using the intelligent network technology.

#### 4. Conclusions

Using a variety of models and teaching materials to create a more engaging learning environment for students is known as multimodal instruction. There are a variety of ways this technique can be used, including video lessons, interactive elements, and a list of questions. Teachers should have a wide variety of ideas to choose from in order to cover all students. Students can either participate in a live class or use an online learning platform to hear the lectures. Using wireless sensor networks and AI in conjunction with multimodal teaching and learning concepts is the focus of this project. In addition, classroom technology is being used to deal with multimodal information. The Random Offloading Algorithm is used in the study for evaluating the classroom education model. The proposed model has provided an accuracy of 98.99%.

#### Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

#### Conflicts of Interest

The authors declare that there are no conflicts of interest.

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