Class – IX

Lesson Plan

Subject: Artificial Intelligence
Topic: Neural Network

Brief Description of the lesson:
A neural network is a method in artificial intelligence that teaches computers to process data in a way that is inspired by the human brain.

I - Specific Objectives:

SP1: KPI-1 To make students understand about the Machine learning. (Understanding)
SP2: KPI-1To make students understand about rule based approach and machine learning approach. (Understanding)
SP3: KPI-2 To make students understand the concepts of Regression. (Analyze)
SP4: KPI-2 To enable students to understand about classification. (Analyze)
SP5: KPI-2To make students understand about clustering. (Analyze)
SP6: KPI-1To make students to understand applications of Neural Network. (Understanding)

II - Behavioral Objectives:

B1: To make students to understand the concept of rules and data. (Understanding)
B2: To make students to understand the need of rule based approach. (Understanding)
B3: To make students to understand how to solve the problem using classification. (Understanding)
B4: To make students to understand concept of classification and regression (Analyze)
B5: To help the students to understand architecture of neural network. (Understanding)

Process / Activities:

Activity (to introduce the lesson):

ACT1: Divide the class into layers. The number of students per layer may vary depending upon the class strength.

Activity (to support learning):

ACT2: Visit the link https://www.youtube.com/watch?v=nOnsdb7rdhc and answer the following

- What is the theme of video?
- List any two of your favorite devices shown in the video.
- Mention any five examples shown in the video along with their uses and benefits.

Activity / Assignment (to assess learning):

ACT3: Conduct a debate in class on the topic 'Neural Networks can surpass human intelligence.

Expected Learning Outcomes

Student will:

1. Be able to understand the use of rule based approach. (Understanding)
2. Learn about applications of neural network. (Understanding)
3. Be able to understand the relationship between the neural network and human nervous system. (Understanding)
4. Be able to experience the architecture of neural network .(Create)
5. Be able to understand the classification algorithm. (Understanding)
6. Be able to understand the regression algorithm. (Understanding)
7. Be able to understand the clustering. (Understanding)

Behavioral Outcomes:

Student will:

- Be able to understand the applications of neural network in day to day life. (Understanding)
- Be able to understand the categorization of problems based on labelled and unlabeled data. (Apply)

- Be able understand relationship between neural network and human nervous system. (Create)
- Enable to bifurcate problems into different models. (Understanding)

- **Placement of objective, Instructional Activities and Assessment**

Topic: AI					
Knowledge	Understanding	Application	Analysis	Synthesis	Evaluation
	SP1		SP3		ACT3
	SP2	ACT1	SP4		
	SP6		SP5		
			ACT2		

	ANNUAL PEDAGOGICAL PLAN (X , ARTIFICIAL INTELLIGENCE)											
KPI NO.	KPI NAME	KPI DEFINITION	WHERE ARE WE NOW? (scale & description)	KPI GOAL	KPI LIMIT	WHAT WE NEED TO DO ?	HOW WILL IT BE ACHIEVED	KPI MEASUREMENT	REVIEW	KPI REPORTING	KPI ACHIEVEMENT	KPI IMPROVEMENT
1	Improvement of student understanding of architecture of neural network	Clarity of identifying rule based and machine learning approaches. (T2L2-SP1,2,6) (T2L2-B1,2,3,5)	65% - Students could identify the working of ANN	60 %	±2%	Clarify the type of approaches	Class Activity	Assessment	After PT-1			
2	Improvement of student understanding applications of ANN	Clarity of identifying architecture of ANN. (T2L2-SP3,4,5) (T2L2-B3,4)	75% Students could identify applications of ANN	65 %	±2%	To make students to identify the features and applications of ANN	Videos related to the topic will be shown for clarity	Through debate	After debate			
3	Understanding of different models	Clarity of Regression, clustering and classification.	75% Students could identify different algorithms	60 %	±3%	To make students identify the differences between models		Term I exam case study	Term End exam I			
4	Understanding of types layers	Clarity of concepts of layers.	50% Students could write the correct and appropriate answer of supervised and unsupervised learning	65 %	±3%	To make students identify the differences between input, hidden and output layer	Videos related to the topic will be shown for clarity	Term End exam case study	Term End exam-II			

ANNUAL PEDAGOGICAL PLAN (X & Artificial Intelligence)

S.no.	What are the problems	Compilation of problems	Categorisation of Problems (Subjective & Behavioural)
1	Students were not able to understand the architecture and relationship of neural network	Comparison between human nervous systeam and neural network	Subjective :- Few students are not able to understand the architecture of nervous system
2	Identification of approaches as rule based and machine learning approaches	Clarity of regression, clustering and classification algorithms	Subjective: Students get confused between who different models
3	Identification of algorithms		
4	Lack of understanding of Input, output and hidden layers	Clarity of concepts of architecture of ANN	Behavioural: Students do not write content according to the questions.

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