TWO DAY WORKSHOP

ON

"ARTIFICIAL INTELLIGENCE AND DEEP LEARNING"

BY

Dr Deepak Garg,

Professor,

Bennet University,

Noida.

Date:

30-03-2019

To 31-03-2019

Targeted Audience: **Faculty**

TWO DAYS WORKSHOP ON
" ARTIFICIAL INTELLIGENCE & DEEP LEARNING "

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Understanding AI

Artificial Intelligence (AI) will soon be at the heart of every major technological system in the world, including payments, compliance, financial markets, security and defense, healthcare, Internet of Things (IoT), and marketing.

Two types of learning are commonly used: supervised and unsupervised. In supervised learning, a collection of labeled patterns is provided, and the learning process is measured by the quality of labeling a newly encountered pattern. Labeled patterns are used to learn the descriptions of classes, which in turn are used to label a new pattern. In the case of unsupervised learning, the problem is to group a given collection of unlabeled patterns into meaningful categories.

The tools of Smart Agent technology

Business rule management system

A business rule management system (BRMS) enables companies to easily define, deploy, monitor, and maintain new regulations, procedures, policies, market opportunities, and workflows. One of the main advantages of business rules is that they can be written by business analysts without the need of IT resources. Rules can be stored in a central repository and can be accessed across the enterprise. Rules can be specific to a context, a geographic region, a customer, or a process. Advanced BRMS offers role-based management authority, testing, simulation, and reporting to ensure rules are updated and deployed accurately

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Neural network

A neural network (NN) is a technology loosely inspired by the structure of the brain. A neural network consists of many simple elements called artificial neurons, each producing a sequence of activations. The elements used in a neural network are far simpler than biological neurons. The number of elements and their interconnections are orders of magnitude fewer than the number of neurons and synapses in the human brain Backpropagation, first described by David Rumelhart in 1986, is the most popular supervised neural network learning algorithm.

DEEP LEARNING

Deep learning became more usable in recent years due to the availability of inexpensive parallel hardware (GPUs, computer clusters) and massive amounts of data. Deep neural networks learn hierarchical layers of representation from the input to perform pattern recognition. When the problem exhibits nonlinear properties, deep networks are computationally more attractive than classical neural networks. A deep network can be viewed as a program in which the functions computed by the lower-layered neurons are subroutines. These subroutines are reused many times in the computation of the final program.

Limits of deep learning

Deep learning is currently one of the main focuses of machine learning. It has led to many speculative comments about AI and its possible impact on the future. Although deep learning garners much attention, people fail to realize that deep learning has inherent restrictions that limit its application and effectiveness in many industries and fields.

A deeper dive into deep learning Additional examples of the limitations of deep learning are explained in a research paper from Cornell and Wyoming Universities titled "Deep Neural Networks are Easily Fooled." Another interesting article is "Deep Learning Isn't a Dangerous Magic Genie. It's Just Math" from Oren Etzioni, a professor of Computer Science and head of the Allen Institute for Artificial Intelligence.

Data mining

Data mining, or knowledge discovery in databases, is the nontrivial extraction of implicit, previously unknown and potentially useful information from data. Statistical methods are used that enable trends and other relationships to be identified in large databases. In general, three types of data mining techniques are used: association, regression, and classification. business management, production control, market analysis, science exploration

Classification and prediction

Classification is the process of designing a set of models to predict the class of objects whose class label is unknown. The derived model may be represented in various forms, such as if-then rules, decision trees, or mathematical formulas.

A decision tree is a flowchart-like tree structure where each node denotes a test on an attribute value, each branch represents an outcome of the test, and each tree leaf represents a class or class distribution. Decision trees can be converted to classification rules.

Classification can be used for predicting the class label of data objects. Prediction encompasses the identification of distribution trends based on the available data.

Genetic algorithms

Genetic algorithms work by simulating the logic of Darwinian selection where only the best performers are selected for reproduction. Over many generations, natural populations evolve according to the principles of natural selection. A genetic algorithm can be thought of as a population of individuals represented by chromosomes. In computing terms, a genetic algorithm implements the model of computation by having arrays of bits or characters (binary string) to represent the chromosomes. Each string represents a potential solution

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Department of Computer Science and Engineering

Program Schedule

Title: Workshop on "Artificial Intelligence and Deep Learning"

Date: 30-03-2019 to 31-03-2019.

Resource Person: Dr Deepak Garg, Professor and Head of CSE,Bennet University, Noida.

Target Audience: Faculty   **Venue:** Computer Lab-I

Date & Timings	Session-I 9:30 to 10:45 (Topic)	T E A B R E A K	11:00 to 12:30 (Topic)	L U N C H B R E A K	Session-II 1:30 to 2:45 (Topic)	T E A B R E A K	3:00 to 4:30 (Topic)
30-03-19	Inauguration		Introduction to AI		Importance of Artificial Intelligence		Importance of Artificial Intelligence
31-03-19	*Context and Deep Learning design		*Context and Deep Learning design		*How it can be used to develop an application		"Applications of Artificial Intelligence".

Incharge

HOD

Department of Computer and Science Engineering
WOKSHOP Attendance

Title: Workshop on "Artificial Intelligence and Deep Learning"

Resource Persons: Dr. Deepak Garg, Professor and Head of CSE, Bennett University, Noida.

Date : 30-03-2019 to 31-03-2019

S.No	Name of the Staff	Signature	
		30-03-2019	31-03-2019
1.	V. Gowtham Prakash	*signature*	*signature*
2.	S.R. Khudasiya	*signature*	*signature*
3.	P. Ramesh	*signature*	*signature*
4.	J. Chandra Babu	*signature*	*signature*
5.	P. Bhanu Prakash	*signature*	*signature*
6.	B. Ramesh	*signature*	*signature*
7.	Rajendra Prasad	*signature*	*signature*
8	P. Sunil Gavaskar	*signature*	*signature*
9	S. Prathap	*signature*	*signature*
10	K. Dharanjay	*signature*	*signature*
11.	P.N. Praveen Kumar	*signature*	*signature*
12.	V. Redeppa	*signature*	*signature*
13.	V. Sravana Sivakumar	*signature*	*signature*
14.	S. Teja Sree	*signature*	*signature*
15.	M.S. Moha seena	*signature*	*signature*

HOD
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P.KOTHAKOTA, Near Pakala, CHITTOOR (Dt.)
DEPT. OF COMPUTER SCIENCE AND ENGINEERING

A REPORT ON
Workshop
On
"ARTIFICIAL INTELLIGENCE AND DEEP LEARNING"

Date: 30-03-2019 TO 31-03-2019

Target Audience: Faculty Members of CSE

Name of Resource Person: Dr. Deepak Garg, Professor and Head of CSE, Bennett University, Noida.

The Department of Computer Science and Engineering of Vemu Institute of Technology has organized a workshop Programme on "ARTIFICIAL INTELLIGENCE AND DEEP LEARNING" from 30-31 march in Computer Lab. The workshop is aimed to create awareness about the ARTIFICIAL INTELLIGENCE.

INAUGURAL SESSION:

Mr.D.Murali, HOD of CSE welcomed and inaugurated the workshop at 9.30 am. Dr. Deepak Garg, started his session after stating the objectives and significance of the programme.

TECHNICAL SESSIONS:

1st Day (30/03/2019):

The Day started with introduction and full of interesting Question and Answers about the Artificial intelligence and learning. In this Day, the two sessions are completely interesting, which make the participant much more anxious to next day.

2nd Day (31/03/2019):

On this Day, the session started with knowing the importance, applications, advantages and disadvantages of Artificial intelligence and learning and how it can be used to develop an application.

VALEDICTORY SESSION:

The program was ended with vote of thanks by Mr. D. Murali, HOD of CSE. The workshop was ended with a feedback session by the members. In that they have expressed their interest and willingness in arranging more programmes of this kind.

OUTCOME:

All the sessions were much informative. The discussed areas are of great benefit for the participants as the topics match with the current working domain. Participants were enlightened with the most widely used advance technologies in this domain. This in turn will help in research activity and placement opportunity.

HOD

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&12(B) of UGC Act. and An ISO 9001:2015 Certified Institute)
Department of Computer Science and Engineering

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WORKSHOP ON
ARTIFICIAL INTELLIGENCE AND DEEP LEARNING

CERTIFICATE OF PARTICIPATION

This is to certify that _____ Ramesh Peramalasetty _____

has participated in

a hands on Workshop on Artificial Intelligence and Deep Learning

held at ......Vemu Institute of Technology, Chittoor...... **from** March 30, 2019 **to** March 31, 2019

Conducted by leadingIndia.ai, a nation wide initiative by Bennett University, Greater Noida, India

PRINCIPAL
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Director leadingIndia.ai
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