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ROLE OF DEEP LEARNING OF ARTIFICIAL INTELLIGENCE IN EDUCATION

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Abstract: Deep Leaning is a branch of machine learning, which is based on Artificial Neural Network. It is Capable of Learning complex patterns and relationship within data. Deep learning in education encompassing both an AI Technology and a Pedagogical Approach enables personalized learning, adaptive systems and intelligent tutoring to improve students understanding and engagement. The cognitive process of acquiring deep, flexible understanding and the application of AI to enhance learning. In Cognitive Deep learning students may acquire critical thinking, problem solving, creativity and communication. Deep Learning is an Artificial Intelligence method that teaches computer to process data in away inspired by the human brain

Index Terms **– Deep Learning, AI Technologies, CNNs**

I. INTRODUCTION

As a Concept, it focus from rote memorization to critical thinking and the application of knowledge in real world contexts. Preparing students for complex challenges .AI powered deep leering tools can analyze student data to predict performance accurate resource and more meaningful learning experience. Deep Learning is an Artificial Intelligence method that teaches computer to process data in away inspired by the human brain

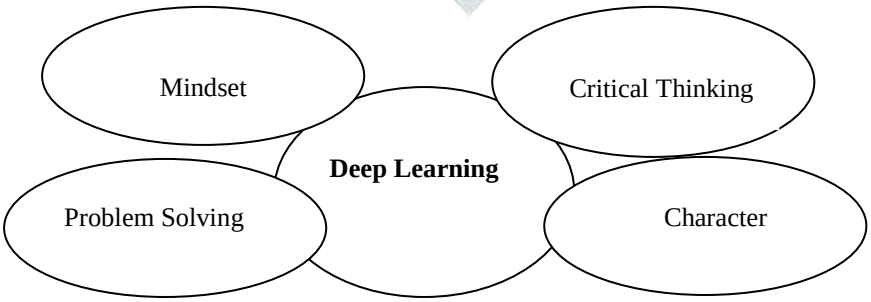
A) A) **Deep Learning as a Pedagogical Approach**

- Focus on Higher –Order Thinking
- Faster engagement and curiosity
- Enhance knowledge retention

B) Deep Learning as an AI Technology

- Personalized Learning
- Intelligent Tutoring System
- Smart Class Room
- Mind Set Analyzing (Mood Changes)

The way deep learning is applied to AI Technologies .It generate best behavioral strategies for students and teachers .The AI applications it can better realize the monitoring of teachers in teaching quality and test the learning ability of students.



II. CASE STUDY

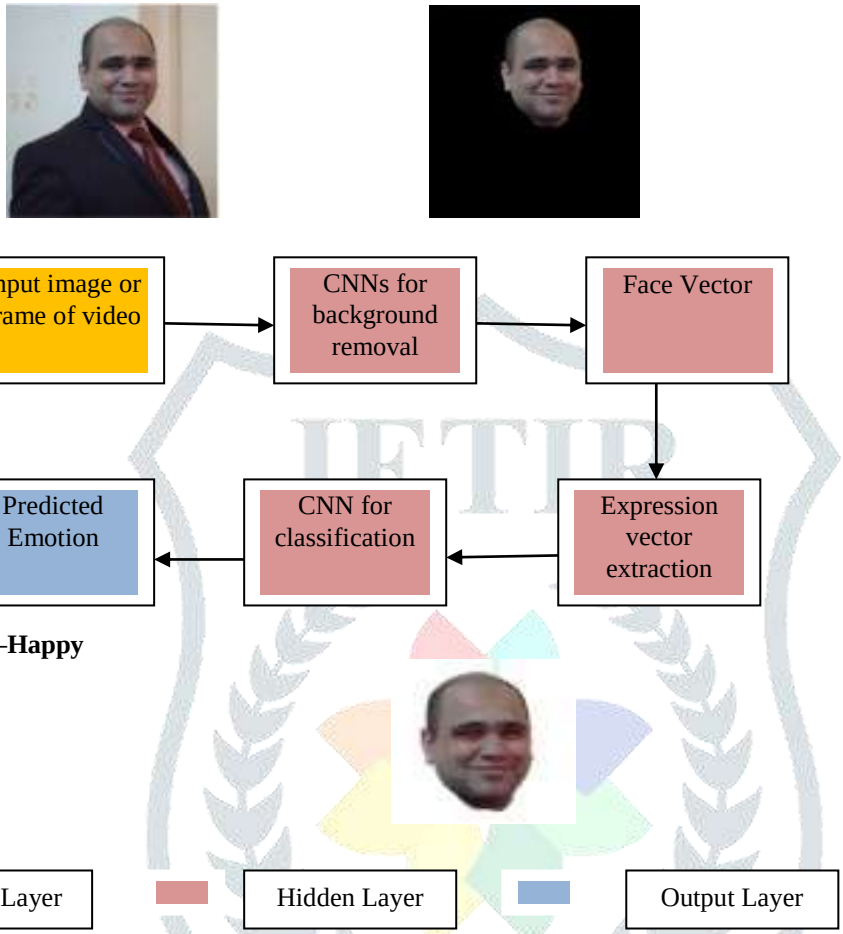
The concept of deep learning algorithm Conventional Neural Network (CNNs) are used in educational case studies for the applications like

- Identify the learning Ability of student
- Analyzing student emotion through video or image

We can take study of Analyzing student emotion through video or image .CNNs using to analyze facial expression in images of students. We understand their emotional state during learning or providing insights for educator. In NNs(Neural Network). a highly

effective deep learning model for facial expression recognition (FER). CNN can classify emotions like happiness, sadness, anger, and surprise with high accuracy.

Neurons get arranged into layers input is the First layer and output is the last with the hidden layer in the middle. Deep learning has proved to be a very powerful tool because of ability to handle large amount of data. The interest to use hidden layers has suppressed traditional techniques especially in pattern recognition. One of the most popular deep neural networks is Conventional Neural networks in deep learning especially when it comes to computer vision application



In deep learning a Conventional Neural Network is a class of deep neural networks, most common applied to analyze visual imagery. Deep Learning model can enables machines to understand and generate human language.

III. ADVANTAGE

It offer great opportunities for personalized learning .It can analyze individual student data , including learning pace .strength , weakness , mode of thinking like happy , sad etc. It can make over all educational system run more smoothly. Data driven insight – it means AI can analyze student data to provide educator and institution with deeper insights and weaknesses, allowing for more informed decision making and curriculum adjustments.

IV. DISADVANTAGE

Privacy and security risks from data collection, potential bias in algorithms and over reliance on technology which can hinder critical thinking. There is a risk of decreased human interaction which could negative impact student's social and emotional development. It may decrease emotional growth of students.Becouse they do not emotionally direct interact with teachers.

V. CONCLUSION

Deep learning role in education is enabled transformative, personalized and efficient learning experience by processing complex data to create adaptive platform, automated grinding.

AI should be seen as a tool to augment, not replace, traditional teaching by enhancing student support tutoring, improves teacher efficiency. Understand student's mental emotions very quickly.

A new discipline called "Deep Learning "arose and applied complex neural network architectures to model patterns in data more accurately than ever before. Computer can now recognize objects in images and video better than human can.

I hope that our readers will find new ways to make these approaches more powerful and continues the journey to understand the principals.

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