

# Concept of Emotional Artificial Intelligence Transfiguring the Mental Health Ecosystem

Nancy Thakur<sup>1</sup>, Mukesh Kumar<sup>2</sup>, Pranjali Mishra<sup>3</sup>, SP Subashini<sup>4</sup>

## Abstract

Emotional Artificial Intelligence has great influence on mental health care. AI facilitate the social interaction, modern-day suitability in a beautiful way. AI detect the disease condition in its early stage, identified the treatment modalities to cure the disease. AI related application helps in psychological assessment as well as clinical decision making. This software also regulates the human emotions when they are under traumatic state or stressful state. In this way emotional artificial intelligence improve the quality of care and reduce cost. Artificial intelligence develops the smart home health care system through which old aged clients benefited as neurological disorders continuously increasing.

**Keywords:** Artificial Intelligence; Machine Learning; Mental Health; Smart home health care system.

**Key Message:** Emotional artificial intelligence helps to monitor, interpret and analyze the human emotions, their behavior as well as verbal and nonverbal form of communications process.

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## Introduction

**“Artificial Intelligence is a way of making a software/program or computer to think and respond as we humans do”**

Artificial intelligence (AI) has become a radical aspect of our lives. AI complements human intelligence in a beautiful way, allowing us to achieve more with the information we have. When used in healthcare, AI practically changes the way patients are being treated. Out of all practical implementations, it's enough for us to mention the most common ones are medical imaging diagnostics, Virtual health assistants. Artificial

intelligence has transfigured the industries all over around the world and likely to change the health care settings. The use of Artificial Intelligence has increased the ability of the healthcare professionals and has helped them to understand the needs and the patterns of the patients in a better way.

Artificial Intelligence (AI) is the intelligence of the machines. Artificial Intelligence (AI) can also be called Machine Intelligence (MI). It can be defined as the ability of the computer or a robot which is controlled by a computer to perform tasks which are generally done by human intelligence. The implementation of emotional artificial intelligence

**Author's Affiliation:** <sup>1</sup>Assistant Professor, Mental Health Nursing Department, <sup>3</sup>Nursing Tutor, Department of Nursing, <sup>4</sup>Dean, Medical Surgical Nursing Department, Galgotias School of Nursing, Galgotias University, Uttar Pradesh 201306, <sup>2</sup>Nursing Officer, Mental Health Nursing Department, AIIMS Rishikesh Uttarakhand 249203, India.

**Correspondence Author:** Nancy Thakur, Assistant Professor, Mental Health Nursing Department, Galgotias School of Nursing, Galgotias University, Uttar Pradesh 201306, India.

**Email:** Nancy\_thakur@yahoo.com

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is unlimited, including in the healthcare ecosystem. Emotional AI gives the machine 'feelings,' or allows the machine to identify and understand the basic human feelings. Artificial intelligence helps out the health care professionals to understand the patient's emotions and provide the treatment to the patient as early as possible with more fineness. Emotion AI can free up medical professionals to interact with their patients by scrutinizing the patient records and producing the reports based on the data, handling administrative tasks, and even helping with diagnosis or intervention.

This can assist the patients to have access for more appropriate treatment with respect to their needs and health state without any necessity of declaring the same to the medical examiner. The software can help clients with mental health problems by using voice analysis. It can also direct and synchronize their feelings appropriately even when they are going through the distressing situation

### *Applications and Benefits*

Some of present and future AI applications in healthcare ecosystem are as following:

- Avatars
- Assistive robots
- Virtual nurses
- Virtual Therapists
- Symptom checking and triage
- Treatment plans
- Medication management
- Health monitoring
- Healthcare system analysis

Robots saves the physical labor of nurses and other therapist by helping aged people in different activities. In this way mental health issue such as social denial, loneliness among old age people declined. Robots are the source of comfort and affection to old aged clients. For nurses, robots could offer far more benefits than drawbacks, particularly given the unending challenges in providing thorough care.

Workloads combined with a chronic lack of staff have already removed the human-touch element of caring from many patient experiences. Robotic nursing could pick up the slack so that nurses can return to a more holistic form of caring, particularly because they can do things like heavy lifting, patient triage, and ensure standardization in core tasks like patient education. For example, robots could do things like show newly diagnosed diabetics how

to manage their disease or inject insulin, which would complement other work by AI that could help people measure their blood glucose more accurately. These are highly repetitive tasks that a program could learn how to do with little effort.

### *AI as Medical Assistants*

Emotion AI reduce the workload of the health care professionals by analyzing patient records and generating reports, managing administrative work and early diagnosis or intervention. This can help patients to have better and customized treatment as per their needs, medical conditions and preference without any necessity of divulging the same to the examiner. The software can help patients with mental health issues by using voice analysis. One such application is Affectiva. It uses a webcam to monitor a person's heart rate, pulses and color changes in the person's face.

### *AI as Emotional Support*

A 'nurse bot' not only helps the aged client to take the medicine but also interact with them to elevate their mood levels.

## **Conclusion**

It is summarized that artificial intelligence helps the health care professionals to analyze the symptoms and understand emotions of patients with more accuracy. Emotion AI can free up medical professionals to interact with their patients by evaluating the patient records and producing the reports based on the data, handling administrative tasks, and even helping with diagnosis or intervention.

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