

# The Role of Artificial Intelligence in Early Detection and Management of Mental Health Disorders

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## **Abstract:**

Artificial intelligence (AI) is becoming more important in mental health. Many people nowadays suffer from conditions including anxiety, sadness, and stress. The main idea is to use smart tools and computer programs to give support to patients and also help doctors with their work. AI is capable of analyzing vast volumes of data, including medical records, brain activity, and even human speech and writing patterns. Because of this, it is possible to spot early signs of mental health problems before the person is aware of them.

One example is wearable gadgets, like smartwatches, which keep track of sleep patterns, heartbeat, and stress levels. AI checks this data and then suggests ways to improve health. Another example is AI chatbots, acting as friendly virtual assistants on the phone. When doctors are unavailable, they talk with patients, listen to their issues, and suggest guidance.

Of course, there are difficulties as well. Because human emotions are too deep and complex, AI cannot take the role of human caring. Another major worry is protecting privacy and personal information. But as technology improves, AI has the power to make mental health support easier, faster, and more affordable. In the future, AI might become a normal part of mental health treatment, helping both patients and doctors in their daily lives.

## **Keywords:**

Artificial Intelligence (AI), Mental Health, Anxiety, Depression, Stress Monitoring. Early Detection/ Wearable Devices. Smart Healthcare .AI Chat-bots, Virtual Assistants, Digital Mental Health, Healthcare Technology, Patient Support Systems, Data Privacy in Healthcare, Human–AI Interaction, Ethical Issues in AI.