

AI IN PERSONALIZED MENTAL HEALTH INTERVENTIONS: CHATBOTS, PREDICTIVE MOOD TRACKING, AND ETHICAL CONCERNS

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Abstract: With the development of artificial intelligence technologies, new opportunities have emerged in the field of mental health. In particular, personalized mental health interventions are playing an important role in providing tailored support to individual human needs. With these approaches, specific strategies are developed to improve the mental state of each person, increasing efficiency compared to traditional approaches. Artificial intelligence technologies, including chatbots and mood prediction systems, help humans manage their moods and reduce mental problems such as stress, depression.

Keywords: artificial intelligence, mental health, chatbots, depression, technologies, strategies, opportunities, Problems, Solution.

Chatbots are software tools that can communicate with humans through natural language and are widely used in the field of mental health. They are in constant communication with users, monitor their mood, help express their feelings and recommend contacting a specialist if necessary. The anonymity and 24-hour operation of chatbots motivate many people to talk about their problems, which is especially important for those who are hesitant to receive traditional psychological help. At the same time, with the help of chatbots, mental health support services are expanding and their effectiveness is increasing. [1]

Mood prediction systems, on the other hand, attempt to detect changes in mental state by analyzing user speech, correspondence words, social media activity, and other digital traces. With this technology, mental problems such as depression or anxiety are identified at an early stage, allowing for timely intervention. For example, signs such as an increase in negative words in the user's correspondence or a decrease in social activity are recorded by the system, and this state of affairs can be reported to the user or his loved ones. This approach enhances preventive measures in maintaining mental health. And the personalized approach takes into account the specific mental characteristics, life experiences and needs of each person. Artificial intelligence systems analyze large amounts of data to create an individual profile and offer personalized advice, exercises, or interventions. This method is more effective than traditional approaches and responds to a person's specific needs. For example, meditation exercises can be beneficial for one person, while physical activity or social support can be more important for another. Artificial intelligence can help determine

this difference. However, there are also a number of ethical and social issues in AI-based mental health interventions. First of all, the issue of confidentiality and security of personal data is important. Information collected about the mental state of users may be misapplied or disclosed to third parties. This causes people to lose trust and can cause them to give up receiving mental support. Therefore, in the development of artificial intelligence systems, it is necessary to introduce strict privacy policies and data protection measures. Another important ethical issue is the possibility that erroneous or flawed recommendations of artificial intelligence systems harm human health. Artificial intelligence algorithms are not able to fully understand the complexity of human psychology, so the advice given by them may not always be correct or sufficient. This condition can be especially dangerous in serious mental illnesses. Therefore, it is important that artificial intelligence systems are used only as auxiliary tools and apply their recommendations under the supervision of professional psychologists.[2]

The difficulty of taking the place of the human factor as a whole is also an important issue. In mental health, communication, trust and emotional ties between a person and a person are of great importance. Artificial intelligence systems cannot provide these aspects because they cannot fully understand emotions and are limited in expressing human affection. Therefore, interventions created using artificial intelligence should not completely replace the human psychologist, but serve as a means of supporting him. There is also the risk of AI systems reinforcing social injustice and inequality. For example, systems developed on the basis of an incorrect or limited database of data can be less effective for certain groups. This increases inequalities in the use of mental health services. For this reason, it is important to use a database that is comprehensive in the development of artificial intelligence systems and takes into account different demographics. In the future, artificial intelligence-based mental health interventions are expected to develop further and be an important tool in improving the mental state of humans. In this process, it will be possible to provide more effective and safe assistance, with the combination of technologies and human resources. It is also necessary to develop rules for the ethical standards and confidentiality of artificial intelligence systems, as well as ensure the constant participation of specialists in this area.[3]

Conclusion: In summary, the role of artificial intelligence in personalized mental health interventions is considered very large and promising. Chatbots and mood prediction systems help humans improve their mental state, providing an adapted approach to their needs. However, in the implementation of these technologies, it is necessary to pay special attention to ethical issues, ensure the confidentiality of information and maintain a human approach. Only when these conditions are met Can artificial intelligence-based mental health interventions be a real aid in improving

human lives. At the same time, it is expected that in the future, these technologies will be further improved and will serve as an important tool in supporting the mental health of more people.

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