Group: Open Group

Sub-theme: I&T for Community (Community Wellness)

Project Code: O-001423

Digital platform for psychotherapy based on AI-assisted VR

(内容只提供英文版)

User Pain Points

There are two pain points of existing services for patients with mental illnesses, which are the lack of licensed mental health professionals and individualized treatment plans. We propose to develop a digital platform for psychotherapy based on AI-assisted VR, which solves these two pain points. With VR technology, therapists can potentially reach more clients at once, and the immersive nature of VR therapy may also allow for more efficient and effective treatment. By leveraging AI algorithms, VR platforms can analyze a wide range of data from users. This data can be used to create individualized treatment plans for different patients.

Solution Benefits

Our VR-based psychotherapy can reduce the workload of licensed mental health professionals and provide more effective treatment to patients with mental illness. Our solution helps some patients, such as ADHD and ASD, better integrate into society. Our digital platform adopts artificial intelligence generated content (AIGC) technology, which can accelerate the production process of VR software. Existing VR-based psychotherapy software on the market mainly uses traditional production methods, with problems of long

production cycles. In addition, current AIGC technology is mainly used for gaming scenarios. Our digital platform is specially designed for VR-based psychotherapy software.

Technologies Applied

Our innovative solution is to apply the most advanced AI technology to VR software production. Unlike the current AIGC technology, we will specialize AI modules to meet the special requirements for VR-based psychotherapy software. For example, color psychology research indicates that different colors and combinations of colors can affect people's emotions and behaviors. In the treatment of mental illnesses, specific colors may be used to induce relaxation, alleviate anxiety, or elevate mood. Thus, we train the model to generate suitable art styles for different patients. Also, we added an emotion recognition module, which can identify patients' emotions and give feedback.

Target Users

User Profile / Persona:

The user group is mainly children and teenagers. Currently, there are about 40,000 children and teenagers suffering from attention deficit hyperactivity disorder (ADHD) in Hong Kong. They usually have difficulty concentrating for a long time and are distracted by external stimuli. Many ADHD patients feel frustrated because of poor performance in school or social situations, which affects their self-esteem. They may also have greater mood swings when facing frustration or pressure.

User Scenario and Goals:

The developed system can be used as part of family education at home to enhance parent-child interaction. It can be used in medical institutions to simulate real social scenarios in a safe virtual environment for behavioral therapy and cognitive training. It can also be used in community centers to promote communication and mutual assistance among ADHD adolescents.
The developed system aims to fully support the social skills development and personal growth of ADHD children and adolescents through an immersive and interactive learning experience, and to build more inclusive and equal social participation opportunities for them.