Neurocognitive disorders like Alzheimer’s disease, Parkinson’s disease, and Huntington’s disease have become more common in recent years, affecting many adults worldwide. However, current diagnosis methods rely heavily on lengthy interviews and paper-based surveys, which can be subjective and often require further assessments by healthcare professionals. To address this issue, there is a need for sensor-based quantitative methods that can accurately assess neurocognitive disorders. Virtual Reality (VR) is a new technology that can provide remote healthcare in a safe and controlled environment. This paper presents an AI-driven VR system that uses embedded sensors to collect physiological and speech signals for quantitative assessment of neurocognitive disorders. The system uses advanced algorithms to analyze linguistic patterns and emotion dynamics from speech and physiological signals, respectively. These models are then integrated into a VR environment to create a virtual mental health clinic. Initial results show that this approach is effective in identifying statistically significant differences between healthy individuals and those with a neurocognitive disorder. The proposed AI-driven VR system is a promising telemedicine approach that could significantly improve population health by providing a new and innovative way to assess neurocognitive disorders in real time.