ABSTRACT

Topic : BRAIN COMPUTER INTERFACE

A Brain-Computer Interface (BCI) is a technology that enables direct communication between the brain and a computer system, without the need for any physical movement or speech. The BCI system translates the electrical signals generated by the brain into commands that can be used to control various devices, such as prosthetic limbs, virtual reality environments, or even a computer cursor. This technology has the potential to significantly improve the quality of life for people with disabilities, such as those with paralysis, as well as providing new ways for people to interact with technology.

BCI systems can use a variety of methods to detect and interpret brain activity, including electroencephalography (EEG), functional magnetic resonance imaging (fMRI), and invasive techniques such as implanted electrodes. However, current BCI technology still faces significant challenges, including issues with accuracy, reliability, and ease of use. Further research is needed to develop more robust and user-friendly systems, as well as to explore new applications for BCI technology in fields such as medicine, gaming, and education.

1.Wolpaw, J. R., Wolpaw, E. W. (2012). Brain-computer interfaces: principles and practice. Oxford University Press. 2.Kauhanen, L., Nykopp, T., Korkalainen, H. (2019). Brain–computer interfaces: a review. Sensors, 19(10), 2570.

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