C1 ATRイノベーション協創チーム国際連携プロジェクト

ATR

Cognitive Training in Older Adults with Brain Machine Interface and Virtual Reality

概要

This project explores using virtual reality (VR) combined with EEG-based neurofeedback for cognitive training in older adults, addressing cognitive decline that impacts memory, attention, motor skills, and executive functioning. The study aims to validate the technology's usability, demonstrate cognitive improvements, and identify EEG measures related to performance.

特徴

- **Focus on Cognitive Decline:** The project targets cognitive decline in older adults, particularly in memory, attention, motor skills, and executive functioning.
- **Innovative Use of VR and EEG-based Neurofeedback:** It combines virtual reality with EEG-based neurofeedback to create an immersive environment for cognitive training.
- **Collaboration and Technology Utilization:** The project collaborates with the National Research Council of Canada and utilizes the bWell platform, a VR software designed specifically for cognitive training.

今後の展開

- In the next phase, we will conduct experiments with individuals with Mild Cognitive Impairment (MCI) to determine whether this technology can aid in improving their cognitive condition.
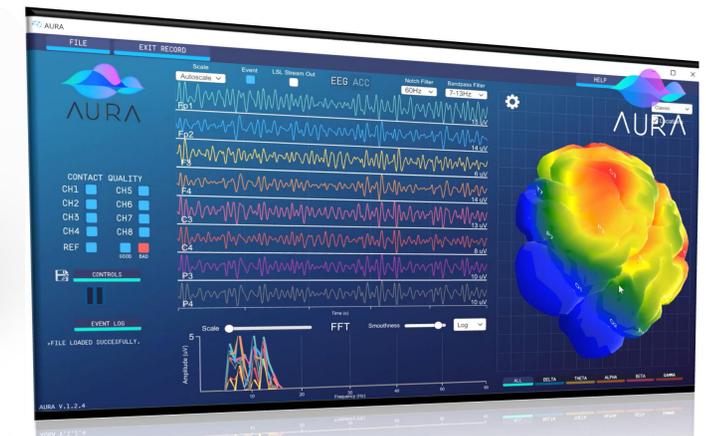
テーマ「万博、そしてその先へ 〜科学技術が描く未来〜」との関連

- This project embodies the theme "Expo and Beyond: The Future Envisioned by Science and Technology" by pioneering innovative solutions that harness VR and neurofeedback to enhance cognitive health and quality of life in the aging population.

EEG-VR Headset

Real-time Brainwave Monitoring

Cognitive Training

VR Task

3 すべての人に健康と福祉を

9 産業と技術革新の基盤をつくろう

17 パートナーシップで目標を達成しよう

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