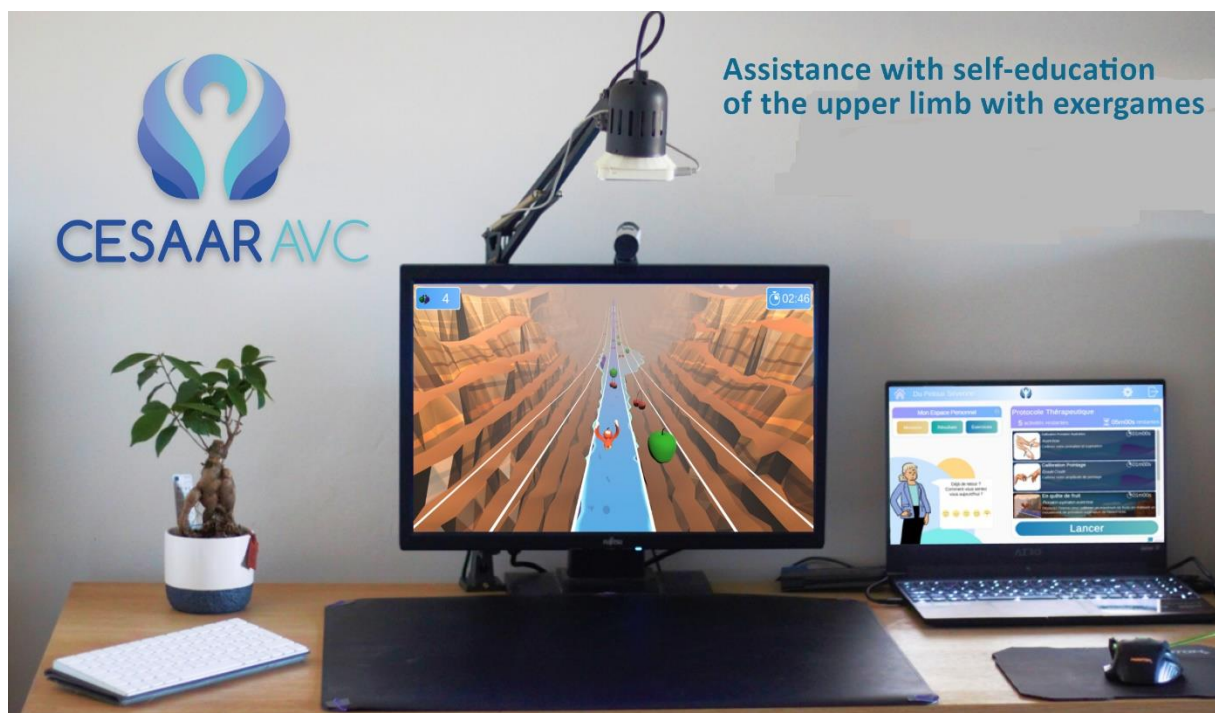


Demo 3, Ax14 CESAAR-AVC project (2016-2022) - Assistance for self-rehabilitation of the upper limb after stroke with exergames



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Background

Cerebrovascular accident (CVA) is a disease that affects 120,000 patients a year in France, about half of whom are left with functional after-effects. Among motor deficits, paresis of the upper limb is the most frequent. Motor recovery is variable and uncertain and can only be achieved through rehabilitation based on repetitive, intensive, task-oriented exercises. Moreover, rehabilitation must be done as early and as long as possible. This lengthy process faces several difficulties, including lack of access to care for some patients, declining financial and human resources, discouragement among patients and reduced adherence to their treatment, and the almost systematic decline in patients' motor skills once rehabilitation is stopped and not compensated for by daily activity.

Objective

The IBISC laboratory and the Centre de Rééducation Fonctionnelle Les Trois Soleils lead the "CESAAR-AVC" project. The aim is to design, develop, and evaluate a system to assist in the home self-rehabilitation of the upper limb after a stroke. This interactive, easy-to-use, low-cost system comprises a device for capturing arm movements and a software program for practicing exercises based on virtual reality and video games, as well as for monitoring the patient's activities. The aim is to complement inpatient care by continuing rehabilitation upon discharge and offering rehabilitation to patients who do not have access to therapeutic services.



[Link to EVR@ platform](#)