



Thesis Project Form

Title (tentative): Evaluating Verticality Perception: A Comprehensive Assessment Protocol for Static and Dynamic Scenarios

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Description

Motivation and application domain

The perception of verticality is a fundamental aspect of human spatial orientation, crucial for balance and walking. Verticality perception refers to the ability to perceive the direction of gravity and align oneself or objects accordingly. This ability is essential for everyday activities, from walking and standing to more complex tasks such as driving or operating machinery. Various factors, including visual, vestibular, and proprioceptive inputs can influence the perception of verticality. The proposed work aims to define and test a protocol to study the impact of the body position on verticality perception in different static and dynamic positions while standing or sitting on a mobile platform.

General objectives and main activities

The general objective will be to define and test an assessment protocol for evaluating the perception of verticality in different static and dynamic positions while sitting or standing. This research could improve assessment and interventions for individuals with balance disorders or spatial orientation difficulties.

This thesis involves the planning of the study, the execution of experiments with human participants and the subsequent data analysis.

Training Objectives (technical/analytical tools, experimental methodologies)

The student will learn to:

- Use a certified robotic medical device
- Administer evaluation tests
- Data analysis
- Statistical analysis

Place(s) where the thesis work will be carried out: movendo technology, santa corona hospital, Dibris

Additional information

Maximum number of students: 1