Machine intelligence in Rehabilitation, Pathologies Characterization and Wildfires

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Overview

INPACT

Move4ASD

IMFire

INPACT - Intelligent Platform for Autonomous & Collaborative Telerehabilitation

The project CENTRO-01-247-FEDER-047148 is funded by the Portugal2020 program and European Union's structural funds.

INPACT

Objectives:

- Automatic and objective rehabilitation assessments
- User-specific follow up analysis
- Engagement of the user for successful therapy process

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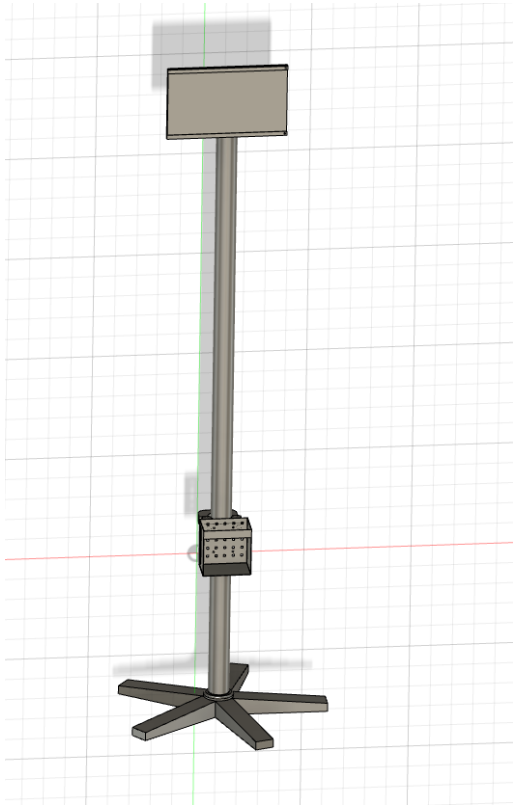

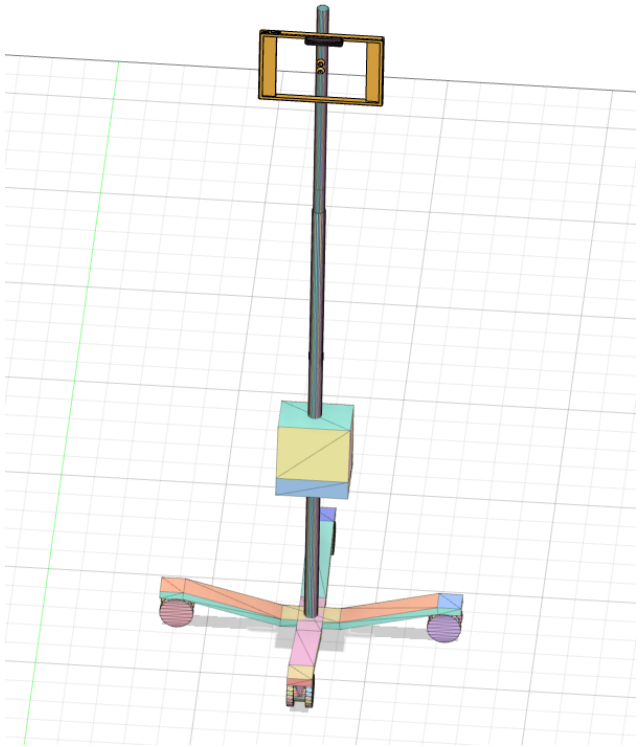

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Move4ASD - Multimodal Motion Analysis Using Machine Learning-based Techniques for Autism Spectrum Disorder Characterization

The project is funded by FCT under grant UIDB/00048/2020.

Mive4ASD

Objecive:

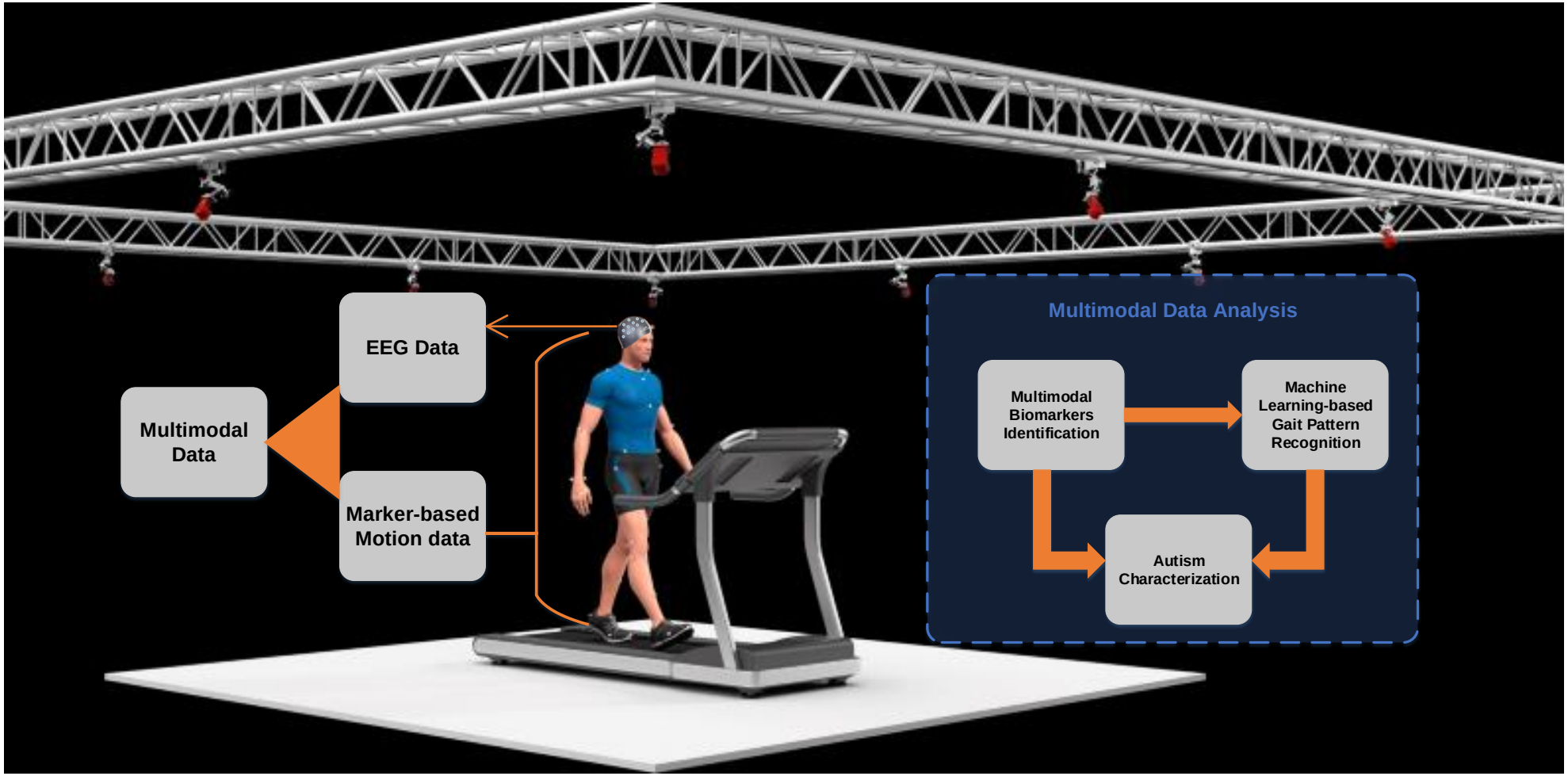
- Multimodal machine learning-empowered analysis of motor functions using combined EEG and vision-based information

Innovation:

- ASD characterization through motor function
- Within task data collection
- Multimodal analysis
- Technological approach empowered by machine learning

The project is funded by FCT under the grant UIDB/00048/2020.

Mive4ASD


EEG Data
Multimodal Data
Marker-based Motion data
Multimodal Data Analysis
Multimodal Biomarkers Identification
Machine Learning-based Gait Pattern Recognition
Autism Characterization



IMFire – Intelligent Management for Wildfires

The project is funded by FCT with reference PCIF/SSI/0151/2018.

IMFire

Development of a Decision Support System for Wildfire management, combining scientific knowledge with state-of-the-art artificial intelligence tools:

Objective:

- New fire behaviour and spread prediction models and windfield models with the inclusion of extreme fire phenomena, and including Machine Learning and Cloud Computing

- Efficient mechanisms for fetching remote data from web sources (satellite, UAV and terrain) in combination with Big Data and High Performance Computing (HPC) tools

The project is funded by FCT with reference PCIF/SSI/0151/2018.

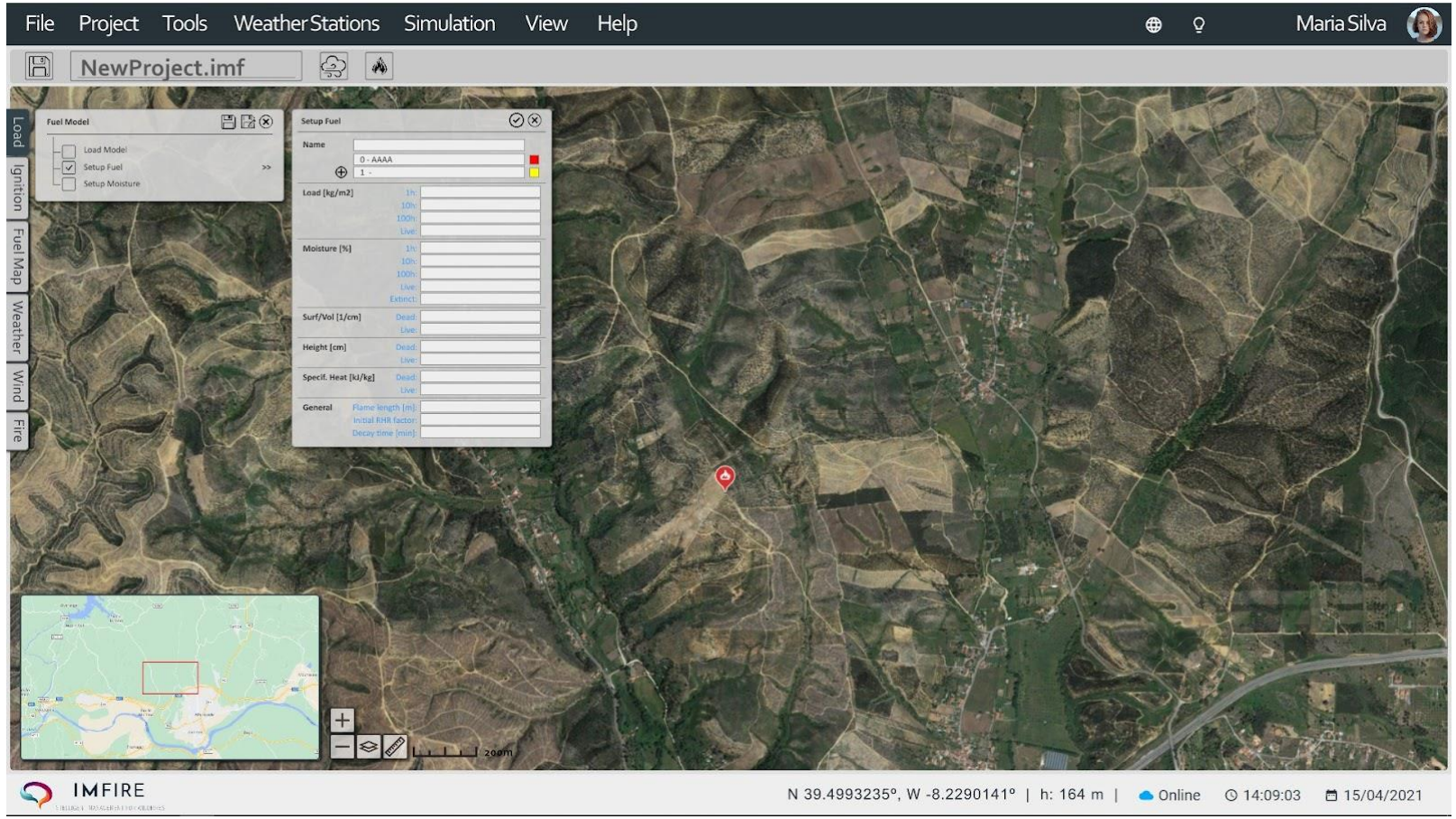
IMFire

Outcome:
Web-based platform, adaptable to any region in the world, suited for civil protection authorities for the integrated and intelligent management of wildfires, in their several stages:

- Prevention – Accurate fire risk assessment;
- Planning – Realtime accurate fire spread predictions;
- Combat – Numerical and statistical analysis of possible combat strategies and their probability of success.

The project is funded by FCT with reference PCIF/SSI/0151/2018.

IMFire



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Thank You For Your Attention