

# eVIDA Research Lab (evida.deusto.es)

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## FIELDS OF APPLICATION AND SOLUTIONS

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### + ICTs for society

- People with special needs: developments for e-inclusion, autonomy and well-being of people with functional diversity.
- Active ageing: technological solutions for telerehabilitation, teleassistance, therapy games (as exergaming) and support for an independent life.

### + Health

- Software for diagnosis support, monitoring and treatment: apps of telemedicine applied to the fields of otoryngology, radiology, neurology, neurophysiology, deratology, oncology, cardiology and gerontology.
- Therapy games: 3D, virtual and augmented reality, combined with interaction and biometric sensors.
- Advanced AI analysis for the modeling of protocols of patient assistance and predictive models for personalized medicine.

## CAPACITIES/TECHNOLOGIES

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**Data Science:** Big data, Machine and Deep Learning for predictive, classifying and selection of key characteristics in systems.

**Software programming (environments and languages):** Unity 3D Game Engine, C#, C++, Java, Python, Matlab, R, Django, HTML5, PHP, Reactive, SAS, SPSS, MySQL, WEKA, CASSANDRA, SolidWorks, AutoCAD.

**Embedded systems:** Arduino, Raspberri Pi

**Virtual and Augmented Reality**

**Biofeedback:** Biometric and automated sensors, eyetracker, EEG, ECG, EMG.

**Additive production** for functional ergonomics

**Apps** for mobile phones, tablets and other devices

**Signal processing:** digital processing of biomedical signals 1D-2D-3D

**3D Reconstruction**

## NETWORK

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Avalon, Virtualware, Kernet, SSI, Fundación Miranda, FEKOOR, APNABI, FSDPV, ASPACE, Biodonostia, BioCruces, IMQ, Quirón.

## REFERENCES/PROYECTS

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- **Most recent projects**

- 2016-2020. CATCH (Cancer: Activating Technology for Connected Health). H2020
- 2018-2020. DAPAS (Deploying AAL Packages at Scale). AAL
- 2018-2020. FRAILTY (frAAgiLe: A platform for detecting and preventing frailty and falls). AAL
- 2016-2018. Sunfrail (Reference Sites Network for Prevention and Care of Frailty and Chronic Conditions in community dwelling persons of EU Countries). HP PJ 04
- 2015-2018. AMIS (Access Multilingual Information opinionS). CHIST-ERA (ERANET)
- 2018-2019. MIFLUDAN (Microfluidics and data analytics for the creation of a support system for personalized treatment in oncology). ELKARTEK. G.V.
- 2018-2019. SERENA (Cloud platform for the creation and personalized consume in immersive and interactive websites for active ageing). Hazitek. G.V.
- 2016-2018. DisleSmart (Deep Learning for functional monocular vision differentiation in dyslexia and ocular motility disorders). GV Sanidad
- 2018-2019. OncoFludat (Personalized treatment for patients in oncology through data analytics and microfluidics integration). GV Sanidad
- 2014-2018. Colonograma (Tech-solution for monitoring and adaptation of the quality of the colonoscopy in colorectal cancer). GV Sanidad