Medical Data Analytics Laboratory

20+ years in Data Value Chain: collection, analysis, knowledge extraction

Data analytics: Expertise in applying data mining to several domains with special emphasis in the biomedical domain.

Natural language processing: Retrieving knowledge from medical texts and Electronic Health Records (mainly) but also applied to other domains (for example: legal domain).

Image analysis: Automatic analysis and annotation of medical images, earth observation, remote sensing and others…

Disease understanding: Analysis of diseases, their characteristics, relationships, etc.

Facilities and infrastructures

CeSViMa
CENTRO DE SUPERCOMPUTACIÓN Y VISUALIZACIÓN DE MADRID

- ❑ Laboratory
- ❑ Supercomputer: Magerit-3 (CESVIMA)
- ❑ Servers
- ❑ Workstations

Research areas associated with Big Science

Big Data Analytics

Medical Data Analytics
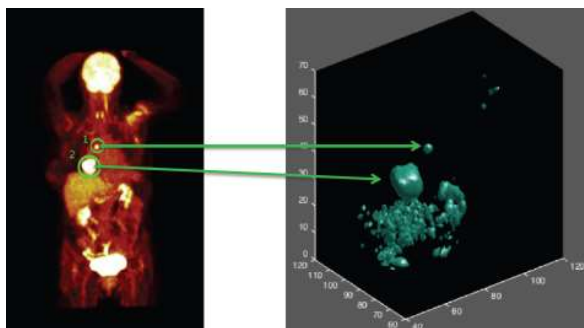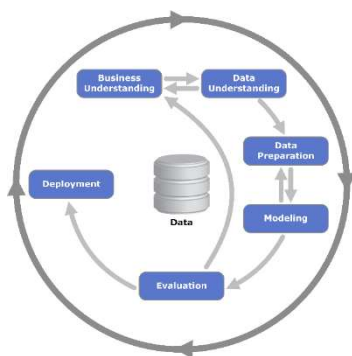

Earth Observation

Main projects in Big Science

- **ECV Fire Disturbance**: *Fire_cci Phase 2. ESA (04/04/2019-03/04/2022), IP: Consuelo Gonzalo, Funding amount: 54.999 (Total: 499.941 €) .*
- **IASIS**: *Integration and analysis of heterogeneous big data for precision medicine and suggested treatments for different type of patients (01/01/2017 – 31/12/2019), H2020 (RIA). CORDIS ref.: 727658, Ernestina Menasalvas Ruiz, Funding amount: 456.250€ (Total: 4.337.475€).*
- **BigMedilytics**: *Big Data Medical Analytics (01/01/2018 - 28/02/2021), H2020 (IA). CORDIS ref.: 780495. Alejandro Rodríguez González. Funding amount: 230.000€ (Total: 14.997.306€).*
- **CUREX**: *seCUre and pRivate hEalth data eXchange (01/01/2019 - 31/12/2021), H2020 (RIA). CORDIS ref.: 826404. PI: Alejandro Rodríguez González. Funding amount: 204.375€ (Total: 4.987.825€).*
- **CROSS CPP**: *Ecosystem for Services based on integrated Cross-sectorial Data Streams from multiple Cyber Physical Products and Open Data Sources (01/12/2017 – 30/11/2020), H2020 (IA). CORDIS ref.: 780167. Ernestina Menasalvas Ruiz. Funding amount: 322.781€ (Total: 3.505.978€).*
- **BDVe**: *Big Data Value ecosystem (01/01/2017 – 31/12/2020), H2020 (CSA). CORDIS ref: 732630. Ernestina Menasalvas Ruiz. Funding amount: 337.125€ (Total: 4.940.286€).*

Software, tools and licenses to be applied to Big Science

- *Jupyter (Python/R).*
- *Matlab.*
- *SPSS.*
- *Gitlab.*
- *MySQL.*
- *Definiens.*
- *QGIS.*

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