ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

DATA VALUE CHAIN (INCLUDING BIG DATA AND OPEN DATA)

Methods, approaches and engineering paradigms in analytics and data management.

Data is becoming a new form of asset: data value is increased by delivering new insights and correlations through the combination of individual data chunks. As a result, the ability of collecting, storing, retrieving, monitoring, sharing, analyzing, visualizing, and exploiting large data volumes in an efficient manner is nowadays one of the most important source of value.

The research of the University of Bologna covers a wide range of issues:

- Real-time analysis of massive multimedia streams: exploiting available open-source big data platforms
- Multimedia database management: effective and efficient retrieval of non-conventional data
- Business intelligence: data warehouse design and optimization
- Data mining and knowledge discovery: methods and algorithms for mining knowledge from large data sets
- SmartData: exploiting the information potential of digital data generated through various platforms
- Open data: collection, organization, and publishing of data on the activities and organization of the University for transparency and open government

HIGHLIGHTS

The University of Bologna is member of the Big Data Value/Data, AI and Robotics Association (BDVA/DAIRO), member of the co-programmed European Partnerships on AI, Data and Robotics.

European funded projects

H2020 - **BISON** BIg Speech data analytics for cONtact centres (2015-2017).

H2020 - **TOREADOR** TrustwOrthy model-awaRE Analytics Data platform (2016-2018) (UNIBO is a third party of CINI "Big Data" Lab).

Moreover the University of Bologna participated in several BIG DATA related European projects in different domain like Health (e.g. in H2020 **COMPARE** and **PROPAG-AGEING**), Environment, Energy and Climate Change (e.g. in H2020 **MOSES**, **iSCAPE**) and Smart Cities (e.g. in H2020 **FLEXMETER**).

Datalab

A research laboratory where large, massive data collections are managed, searched, monitored and analyzed. Research focuses on tackling complex problems that cannot be solved by means of traditional techniques, due to the inherent nature of data or to the architecture of the system at hand. The lab is equipped with a computer cluster based on Open Source BigData platforms, like Hadoop, Spark, Storm, and Flink and is the site of the Innovation Development Center: a lab, based on Google for Work technology, supported by Injenia (Premier Google Partner in Italy). Collaborations include the BigData lab @CINI and the SuperComputing Applications and Innovation (SCAI) department @CINECA.

Master and PhD programs

Masters in "Data Science", "Big Data Analytics", and "Internet of Things" (Bologna Business School). PhD program in "Data Science and Computation".