BSC Training Course: Introduction to Big Data Analytics

Objectives

The objective of this course is to introduce the main concepts and technologies related to Big Data and Data Analytics and its applications to real projects. The course brings together key information technologies used in manipulating, storing, and analysing data including:

- Introduction to storage and process unstructured data. Main concepts of NoSQL databases
- Large scale processing: Apache Spark and its core libraries for data manipulation, machine learning, data streams and graph analytics
- Characterization of a data mining problem and its relation with business intelligence, dig data and exploratory statistics
- Basic concepts of data visualization and tools
- Awareness on existing biases in Big Data Analytics and Artificial Intelligence (AI) from a multidisciplinary perspective

Learning Outcomes

Students will be introduced to systems that can accept, store, and analyse large volumes of unstructured data. The learned skills can be used in data intensive application areas.

Academic Staff

Course Convener: Maria-Ribera Sancho, E&T Manager, BSC

Course Lecturers: Josep Lluis Berral (BSC), Patricio Reyes (BSC), Maria Teresa Grifa, Data Scientist, Oscar Romero (UPC), Alberto Abello (UPC), Oscar Romero, Dept. of Service and Information System Engineering, (UPC-BarcelonaTech), Maria Cristina Marinescu (BSC) Joaquim More (BSC), Artem Rashetnikov (BSC), Petar Jovanovic (UPC), Oriol Lehmkuhl, and Arnau Miró, CASE - Large-scale Computational Fluid Dynamics (BSC), Karina Gibert (Intelligent Data Science and Artificial Intelligence Research Center (IDEAI-UPC)), Mari Paz Linares, inLab FIB (UPC), Daniel Rodríguez Rey, Atmospheric Composition Group Recognized Researcher, ES (BSC), Fernando Cucchietti, Head of Data Analytics and Visualisation (BSC), Davide Cirillo, Recognised Researcher in Machine Learning for Biomedical Research,
Materials

The relevant materials will be made available to the participants during the course.

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Further information

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For further details about Postgraduate Studies in UPC - Barcelona School of Informatics (FiB), visit the website.

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