

AIBT103 – Big data processing

From the Advanced Master AIBT

(Artificial Intelligence and Business Transformation)



Artificial intelligence is creating new jobs and new ways of working. This is crucial to acquire some basic knowledge about AI and big data in order to lead one's firm and teams through change and transformation challenges.

Skills learned

After completing this course, participants will be able to:

- Implement the distribution of simple operations via the Map/Reduce principle in Spark;
- Explain the difference between CPU and GPGPU computation;
- Connect on a cloud computing engine (e.g. Google Cloud Platform) and launch a simple task;
- Understand the usefulness of containers
- Deploy a Docker container.

Prerequisites

- Engineering Degree on Computer Science or a related domain (telecommunications, etc).
OR
- Engineering Degree on another subject with a major on Computer Science.
OR
- Work experience on Computer science.

Key elements

Dates:

9 - 12 December 2019

Duration:

28 hours, 4 days

For whom:

recent graduates, jobseekers and experienced employees

Location:

ISAE-SUPAERO, Toulouse

Course fees: 2300 €

Language: English

Learning objectives

Harnessing the complexity of large amounts of data is a challenge in itself. But Big Data is more than that: originally characterized by the 3 Vs of Volume, Velocity and Variety, it often requires dedicated computing solutions, which will be explored in this module.

Practical information and registration

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Programme

Distributed computing with Spark:

- History
- MapReduce paradigm
- Hadoop Stack
- Hadoop Distributed File System
- MLib Machine Learning library

Virtualization and cloud computing:

- Different approaches to virtualization
- Economical models
- Technical benefits (snapshots, dynamic deployment and migration, failover...)
- cloud engines (principles, deployment examples, node choices)

Docker:

- History,
- Fundamental differences w.r.t. virtualization
- Docker components
- Tools