COURSE SYLLABUS

Business Intelligence

2021-2-F9101Q023

Aims

The course would provide bot methodological an technical aspects needed to understand and realise BI solutions in real-life contexts, including the whole data lifecycle (KDD) and identifying criteria for the evaluation of the solution provided.

Contents

Introduction to BI and Big Data Analytics

BI Architectures

Knowledge Discovery in Databases – KDD

Detailed program

1. Introduction to BI and Big Data Analytics

a.   Goal and rationale of BI systems

b.   The value of knowledge – digital economy and data driven decision making

c.   The Structure and subsequent evolution of BI and Big Data Analytics systems

2. BI Architectures

a. The Evolution of BI Architectures (towards Big Data)

b. **Decision Models on the basis of business functions**

c. **Definition, selection and metrics for computing directional indicators (KPI – CSF)**

3. Knowledge Discovery in Databases – KDD

a. **Phases, methodologies and the value for business purposes (Data as value)**

b. **Models for data quality evaluation – structured data vs (unstructured) Big data**

c. **Models for data management and analytics – relational vs schema free (i.e., graph db)**

d. **Models and techniques for data analysis – how to use data for fact-based decision making**

e. **Visualisation models for decision making – selecting the proper model for each stakeholder – data story telling and indicators**

Prerequisites

None

Teaching form

The course will be provided by means of lessons, seminars, and laboratory sessions and homework.

** Due to the COVID-19 emergency, all the lessons will be provided in a mixed modality: partially on-site (if possible) and in a synchronous way, that is all lessons will be recorded and made available on the website **

Textbook and teaching resource

Lectures with the support of slides, laboratory and real-life case studies. Scientific Papers and books indicated by the lecturer. The software used is either available as open source or through academic license

Semester

I semester

Assessment method

Due to the COVID-19 emergency, all exams will be performed online composed by:
-- an oral examination
-- a homework

Office hours

By Appointment