DATA SCIENCETECH INSTITUTE

MSc in Applied Data Science & Big Data

Integrating Semantic Web technologies in Data Science developments *(IS4-001)*

Volume of classes hours: 25 hrs *(± same personal work expected)*

Course summary:

This course will train students to Web and Semantic Web Standards (W3C). It will present techniques and languages allowing to:

- Represent and publish sematic-rich data on the web (RDF)
- Select and query these data very precisely on the web (SPARQL)
- Present the notions of vocabularies in order to reason and deduce new data to enrich semantic descriptions (RDFS, OWL, SKOS)
- Trace and follow data history (VOiD, DCAT, PROV-O, etc.)

These elements are essential to make better use of web-rich data in Data Science developments.

Course Objectives:

- Towards a web of linked data
- RDF data model
- RDFS ontologies and schemas
- OWL formalisation
- Towards more data integration for Data Science applications

Technologies Used:

CURL, Java, CORESE/KGRAM, Protégé and other online services

Course mini-projects description:

You will create, query, validate and transform a set of small schemas and linked data