Contribution ID: **102**   Type: **Workshop**

Academic Supply For Data Science –Consultation And Validation Of Body Of Knowledge

Thursday, 12 November 2015 11:00 (20 minutes)

The emergence of Data Science technologies (also referred to as Data Intensive Science or Big Data technologies) is having an impact, at a fundamental level, on nearly every aspect of how research is conducted, how research data are used and shared. Data Science is considered as main enabler and facilitator of the recently launched by EC the Open Science initiative for European Research Area (ERA).The effective use of Data Science technologies requires new skills and demands for new professions, usually referred as the Data Scientist: an expert who is capable both to extract meaningful value from the data collected and also manage the whole lifecycle of Data, including supporting Scientific Data e-Infrastructures. The future Data Scientists must posses knowledge (and obtain competencies and skills) in data mining and analytics, information visualisation and communication, as well as in statistics, engineering and computer science, and acquire experiences in the specific research or industry domain of their future work and specialisation.

The Horizon 2020 EDISON project (1 September 2015 –30 August 2017) aims to develop a sustainable business model that will ensure a significant increase in the number and quality of data scientists graduating from universities and being trained by other professional education and training institutions in Europe. This will be accomplished through the development of a number of inter-connected activities including the definition of required skills and competences. For that purpose a Data Science Body of Knowledge (DS-BoK) will be created for defining a Data Science Competence Framework (CF-DS) and also a Model Curriculum (MC-DS).

The project will work in close co-operation with experts and practitioners involved and interested in the development of Data Science academic educational and professional training programes. The target is to discuss and to describe new outlines of professions in the field of data scientist for academic and industrial purpose. This cooperation will take place in consultation and validation activities and roundtables with relevant stakeholders and institutions.

The proposed workshop Academic Supply For Data Science will contribute by presented EDISON recent development and initiate an open dialogue across communities to characterize the existing education and training resources in order to create an Body of Knowledge.
Participants are invited to contribute to the following objectives:

• Inventory and taxonomy of existing curricula, training programes and related educational resources
• Determining the Body of Knowledge for Data Scientists, identify common conceptual elements and gaps among the present offering
• Overview of existing curricula, training programes and related educational resources as contribution to the Data Science Model Curriculum (MC-DS) definition
• Formalise the Data Scientist profession definition

Target audience:
Universities and Scholars to contribute to the development of the EDISON Model Curriculum for Data Science as well as their corresponding educational offering, i.e., study programes and courses.

Links, references, publications, etc.

https://rd-alliance.org/groups/education-and-training-handling-research-data.html

http://eskills4jobs.ec.europa.eu/

e-Skills for the 21st Century Fostering
Competitiveness, Growth and Jobs http://ec.europa.eu/enterprise/sectors/ict/e-skills/index_en.htm

Demchenko, Yuri, Emanuel Gruengard, Sander Klous, Instructional Model for Building effective Big Data Curricula for Online and Campus Education. 1st IEEE STC CC and RDA Workshop on Curricula and Teaching Methods in Cloud Computing, Big Data, and Data Science, in Proc.The 6th IEEE International Conference and Workshops on Cloud Computing Technology and Science (CloudCom2014), 15-18 December 2014, Singapore

The Data Harvest: How sharing research data can yield knowledge, jobs and growth. An RDA Europe Report. December 2014

Additional information

One major objective of the EDISON project is to provide a basis for the formal definition of the Data Science Profession and the definition of the Framework for the Data Science education and training.

This objective is achieved by analyzing the requirements of the communities in order to identify the competencies and skills required by the Data Scientist Professionals surveying the existing education and training resources including education and training programes, courses, literature and datasets. This will be done to first create an inventory and a Body of Knowledge (DS-BoK) as a foundation for the following activities. So there will be an early and initial consultation and validation necessary, which will be continued in the following phases of the EDISON project because the life span of the project is only two years and the required infrastructure must be already built after six month.

Primary authors: BROCKS, Holger (InConTec GmbH); BECKER, Jana (FTK - Forschungsinstitut fuer Telekommunikation und Kooperation e.V.); Prof. HEMMJE, Matthias (FernUniversität in Hagen)

Co-authors: DESKA-DRÜKE, Beate (FTK - Forschungsinstitut fuer Telekommunikation und Kooperation e.V.); BREWER, Steve (University of Southampton); WIKTORSKI, Tomasz (University of Stavanger); DEMCHENKO, Yuri (University of Amsterdam)

Presenter: MANIERI, Andrea (Engineering)

Session Classification: Academic Supply For Data Science