Demand for Data Science Skills & Competences – Consultation and Validation of the “Competence Framework”

Academic Supply to Data Science – Consultation and Validation of the “Body of Knowledge

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Objective 1: Data Science Curricula Foundation
Promote the creation of Data Scientists curricula by an increasing number of universities and professional training organisations.

The Data Science Competence Framework (CF-DS) including Taxonomy of competences and skills, compliant with e-CF3.0.

The Body of Knowledge (BoK) for the Data Science (DS-BoK) that will map required competencies/skills and existing academic, research and technology disciplines

A Model Curriculum for Data Science (MC-DS) as a template for building customisable Data Science curricula based on the proposed CF-DS and DS-BoK.

Objective 2: Education and Training Environment
Provide environment for re-skilling and certifying Data Scientists expertise to graduates, practitioners and researchers throughout their careers.

Create EDISON Education and Training Marketplace by leveraging EGI Engage Training Marketplace.

Objective 3: Sustainability Model
Develop a sustainable business model and a roadmap for European education and training on Data Science technologies, provide a basis for the formal recognition of the Data Scientist as a new profession.

Create Community of practice for sustainable Data Science education and training supported by EDISON Liaison Group(s).
Workshop Objectives

• Interim results and establish open dialogue
  – Define basic competences and skills
  – Discuss and describe new outlines of professions
  – Consultation and validation

• Data lifecycle
  – Data Creation
  – Data Organisation and Management
  – Data Processing
  – Data Preservation and Curation
  – Data Access and Retrieval
  – Data Analytics and Visualisation
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Themes

• The analysis of organizational and employer requirements for competences and skills of Data Scientists

• The elicitation of education and training needs in various contexts, focusing on different industry sectors. Particular training and continuous education needs for practitioners (or self-made data scientists) to support advanced European Research e-Infrastructure development.

• Discussing perspectives of the educational path for the Universities with the potentials of starting careers into data-driven industries, as well as for life-long learning programs to identify suitable paths to carrier development

• Identifying and formalizing profiles corresponding to the major stakeholders/employers of the future specialists
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Themes

- The EDISON inventory and taxonomy by providing an overview of existing curricula, training programmes and related educational resources
- Determining the Body of Knowledge for Data Scientists, identify and discuss common conceptual elements and gaps among the existing offerings
- The development of the EDISON Data Science Model Curriculum
- The formalization of the Data Scientist profession
Outline

Demand for Data Science Skills & Competences 9:00 – 10:30

• Yuri Demchenko – EDISON: Defining the Data Science Competence Framework
• Kevin Berwind - Big Data Infrastructure And Skills From A Consulting Point Of View
• Marco Xaver Bornschlegl - Data Science Competences To Understand Big Data Analysis From A Management Perspective
• Sy Holsinger - Demand from e-Infrastructures
• Q&A

Academic Supply to Data Science 11:00 – 12:30

• Andrea Manieri - Academic Supply For Data Science – Consultation And Validation Of Body Of Knowledge
• Gianluca Reali - Industry-driven Master Certificate in Data Science
• Yuri Demchenko - The online big data course at the University of Liverpool
• Christopher Jung - Education Interests of Summer School Students at GridKa School
• Discussion