



First project Multiplier Event

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“A Job Knowledge Base for Everyone”

DISKOW Project Partners

University of Hannover (L3S Research Center) – Coordinator www.l3s.de

IER SAS - EKONOMICKY USTAV SLOVENSKEJ AKADEMIE VIED, Slovakia

www.ekonom.sav.sk

ENG - ENGINEERING - INGEGNERIA INFORMATICA SPA, Italy www.eng.it

PNX - PETANUX GMBH, Germany

www.petanux.com

Contacts

Rome (Engineering Ingegneria Informatica spa, P.le dell'Agricoltura, 24 Roma)

Leandro Lombardo: leandro.lombardo@eng.it

Ujwal Gadiraju: gadiraju@l3s.de

Valverde (Centro polifunzionale Stefano Bozzola. Loc.Casa Balestrieri, Valverde)

Ivana Marenzi: ivana.marenzi@L3S.de

DISKOW: Discovering job Knowledge through Web Analytics towards facilitated mobility of European Professionals and Refugees Career Integration

<https://www.diskow.eu/>

It is a big challenge to discover required competences to specific jobs, update and adapt vocational and educational training (VET) programs, and also provide further tools and support for strengthening the basic and key competences. Job seekers face difficulties in understanding the required job knowledge and competences through reviewing job profiles. Moreover, public and private sectors need IT-based tools to simplify transparent recognition of domain specific job knowledge while setting up their job profiles. It becomes more challenging when different countries provide different priorities and job descriptions due to various job market characteristics and demographic circumstances.

In comparison to traditional data sources, web data offer a range of advantages, are available in real time and allow researchers to compile large, detailed and diverse datasets in an easy, fast, flexible and relatively inexpensive way (covering topics for which traditional sources are absent or weak; examples are self-employment and on-the-job search). In this regard, DISKOW discovers job specific knowledge from web data and provides recommendations and a job knowledge base (JKB) that could strengthen key competences in VET programs. As a result, job seekers will be able to use the job knowledge base transparently to provision and develop their domain specific skills and competences. The mined information can be used to identify top demanding jobs, skills and competences. One major concern in the DISKOW project is to collect data on job openings and try to shorten the gap between job positions and low-skilled workers in order to increase employability of job seekers.

Big picture

Improving job knowledge, competencies and skills of job seekers is essential to increase their **employability** and reduce the risk of poverty and social exclusion. According to the European Commission, proper development and use of job knowledge, competencies and skills are key factors for success in finding a job and keeping it [Bruges Communiqué (BC), 2010].



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Specific problem addressed by the project

In the last few years, substantial efforts have been done by governments, international organizations and other institutes to improve our understanding of the **dynamics of the labor market**. These efforts have resulted in a series of applications, tools and sources that cover labor demands, supply or matching and that shed more light on skill gaps and mismatches. ESCO (European skills, competences, qualifications and occupations tool developed by the EC), Cedefop's skills panorama and EURES (EU's job portal) as well as European Qualifications Framework (EQF) are few examples of such efforts.

Traditionally, to get more insight into labor demands or supply, researchers and policymakers have relied on interviews, trade publications, surveys, and vacancies. While these traditional data sources have some clear advantages, they are also characterized by limitations that can be addressed by using **web-based data** instead.

Web is a gold mine for job knowledge discovery. Linked open data, job announcements, social media, job search engines, forums, wikis, data streams and interlinked information are few examples of such valuable job-related sources on the net. The main problem in this regard is not in the availability of data and how to retrieve them, but in how to cleanse, **explore**, **visualize** and **interpret** such huge



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volume of various web data: in order to streamline this process and make such data suitable for further exploitation (e.g. consumed by specialised mobile apps) an open **Job Knowledge Base (JKB)** is proposed that can be used by employers, employees, job seekers, labor market experts and policy makers. Such JKB contains different types of information such as responsibilities and roles, required competences (described using existing standards, such as eCF, EQF, etc.), that could be used to develop training and identify priorities, wage information, geographical and demographic trends, cultural issues, demands of the job markets in different domains, job announcement information and rates, job popularity and other useful statistics. The project DISKOW aims at creating a JKB prototype, based on existing open source Business Intelligence platform in order to cover the most important factors in this regard such as required job knowledge for specific job.