5th OJA Forum | 24 May 2023
Online Event
All times stated in CEST

Agenda

Session 1 | The Online Job Ad Analysis Cycle

1:00 pm	**Welcome**
1:25 pm	**First results of the project "The Online Job Ad Analysis Cycle - From data collection to analysis".** Johannes Müller – &effect

This session presents the first results of the project "The Online Job Ad Analysis Cycle - From Data Collection to Analysis". After an introduction to the structure and basic ideas of the project, the author Johannes Müller gives insights into a chapter of the project. Finally, the challenges in structuring the field are summarized and next steps are outlined.

2:20 pm	**Networking**
2:50 pm	**Break**

Session 2 | Prediction of skills based on OJA

3:15 pm	**Can skill demand be predicted? The potential and limits of different approaches.** Kasper Kok – Textkernel

Predicting the demand for future skills is on the wish list of many organizations. But is it even possible? In this talk Kasper Kok from Textkernel will explore different methods: (1) extrapolating from historical trends, (2) identifying skills that are likely to replace each other, (3) correlating general market trends to skill demand. We will discuss the viability and limits of each of these approaches.

3:45 pm   **Tracking the Twin Transition: Evidence from German OJA Data**
Fabian Stephany – Oxford Internet Institute/DWG

The term "Twin Transition" refers to the transition to a carbon-neutral economy, which the European Union has set as a target for 2050. Sustainable digital technologies play a central role in this process. In July 2022, for example, the EU's Joint Research Center (JRC) published a report on the most important prerequisites for a successful green and digital transformation in the EU. The report takes the European Green Deal as a starting point and considers the opportunities and challenges in achieving this goal. The green and the digital ("blue") transformation are linked and can potentially even reinforce each other. In this analysis, we present the possibility of using online job advertisements from Germany (2016-2023) to quantify the frequency, importance, and economic premium of green and blue skills over time and to evaluate the potential of predictions about future developments.

4:15 pm   **Break**

4:25 pm   **Probing the Limits of Skill Demand Forecasting**
Wyatt Clarke – IBM Research

Our group applied deep learning architectures to precisely predict future mentions of skills in online job advertisements. This talk will report what we have learned about when skill forecasting is useful, how much deep learning can improve forecasts, and implementation challenges of maintaining indices of future skill demand for many skills.

4:55 pm   **SCODIS: Job Advert-derived Time Series for high-demand Skillset Discovery and Prediction**
Elisa Margareth Sibarani – Leibniz University Hannover

We propose a dynamic overview of high-demand skill sets being requested in the job market through a SCODIS framework. SCODIS utilizes a graph-based method to represent skills in demand in the labor market, and specific critical indices (centrality, density) and cluster categories (isolated, secondary, principal, crossroads) that facilitate our ability to compute and reason about novel strategical-oriented observations. A critical next step is to

extend our framework for comparing clusters over time. In this context, we would like to improve the performance of series generation by leveraging the knowledge graph for semantic similarity, which currently relies only on the contents from each cluster.

5:25 pm   **Feedback and farewell**