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The OECD Internship Programme is designed to bring highly qualified and motivated students with diverse backgrounds into the Organisation to work on projects linked to the Strategic Orientations of the Secretary-General and to support the corporate functions of the Organisation. Its main goal is to give successful candidates the opportunity to improve their analytical and technical skills in an international environment.

Knowledge Engineer / Scientist Intern

Development of a skills ontology for AI-assisted Talent Management applications

Main Responsibilities

The internship is a 6-months offer, focusing on further refining the OECD skills ontologies for corporate talent management applications.

Under the management of the Analytics and Organisational Development Advisor, and in close collaboration with the Talent Management and Analytics Group's People Data Analysts, the Knowledge Engineer / Scientist will be designing and supporting the implementation of Skills Ontology for Talent Management Applications and share expertise around knowledge structure and semantic analysis techniques, including knowledge modelling and representation principles (e.g. conceptual data modelling techniques for ontology development).

The intern will be working on the following research activities:

1. Explore and provide capabilities to support the management of skills ontologies and their evolutions in the use of AI-based talent Management applications, applying a range of relevant languages and tools (RDF, OWL, SKOS, SPARQL, Protégé, Mongo DB, Neo4j,...) to:

    - Support ongoing work aiming to search and extract relevant skills from structured and unstructured data; such as job descriptions, candidate/graduates profiles, job offers and training course descriptions;
    - Support the work of the People Data Analyst to automatically classify concepts, build hierarchies of concepts and relations
    - Extend existing taxonomies with synonyms, relationships and other semantic enrichments in order to support the detection of the same skills presented under different phrasing;
    - Collaborate with domain experts to refine and validate the outputs;
    - Participate to the design and development of an application for the visualisation of the skills graph structure, as well as dedicated graphical web interface or widget to be displayed for users to re-use and augment skills data in order to build individual skills profiles

2. The internship work on skills data described in (1) may be extended to other types of applications, such as skills-based workforce planning, in particular:

    - looking into skills and competencies required for hire across the Organisation

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- design a rigorous ontological model to support the inference of in-house skills of OECD staff to build skills profiles as inputs for skills analytics work ("as-is" skills supply), as well as setting up a process for end-user verification

- develop visualisation of skills demand vs. supply over time, at the Organisation and directorate levels, so as to identify most in-demand skills, growing skills demands and draw scenarios for talent management;

- setting up a process for mapping external skills required for hire on the market, to deliver insights supporting the OECD's talent acquisition strategy

- drawing from the ontology model on the job descriptions and individual profiles, map possible mobility or career development pathways;

Other potential applications include, but are not limited to, learning and development recommendations and matching qualified candidates to internship offerings.

You can submit your application by **6 February 2021**, via our online application platform, specifying in your cover letter that you are interested in the Knowledge Engineer / Scientist Intern position and selecting Human resources as one of your areas of interest.

After having submitted your application, please notify Ms Depeige at audrey.depeige@oecd.org