

Bucharest University of Economic Studies (UES)

ANNOUNCEMENT

The Bucharest University of Economic Studies is organizing a selection for the following vacancy:

Project director - 1 position – within the project „*JobKG – A Knowledge Graph of the Romanian Job Market based on Natural Language Processing*” - 760274/26.03.2024, project code 178/31.07.2023

Part-time work of maximum 120 hours/month, distributed unequally, gross hourly salary 241,50 lei, fixed period until June 30, 2026.

A. To participate in the competition, candidates must meet the following general and specific conditions:

1. General conditions:

- a) has Romanian nationality, citizenship of other Member States of the European Union, of States belonging to the European Economic Area and/or foreigners as they are defined by Art. 2 lit. a) of OUG 194/12.12.2002 with subsequent amendments and additions, respectively persons who do not have Romanian citizenship, citizenship of another Member State of the EU or the citizenry of the Swiss Confederation;
- b) has the minimum statutory age;
- c) has full capacity to work;
- d) meets the study conditions and, where appropriate, seniority or other specific conditions according to the requirements of the position put up for competition;
- e) has not been definitively convicted for committing a crime against humanity, against the State or against authority, or for an offence committed in the course of or in connection with the performance of his or her duties, which obstructs the course of justice, or for forgery or acts of corruption or a crime committed with intent, which would make him or her incompatible with the exercise of the function, except for the situation in which rehabilitation intervened.

2. Specific conditions:

- a) level of education: higher education completed with a Ph.D. degree
- b) field of study: branch of science
 - economic sciences, field of physical sciences and engineering, life sciences
- c) Other specific conditions:
 - i. The candidate holds a Ph.D. degree awarded a minimum of 3 years before the date of approval of the organization of the selection procedure (22.05.2024);

- ii. The candidate has led, in the past 7 years prior to the deadline before the date of approval of the organization of the selection procedure (22.05.2024) at least one research and development project;
- iii. The candidate is a researcher whose affiliation institution is located outside Romania and who has carried out research activities outside Romania, for at least 3 years before the date of approval of the organization of the selection procedure (22.05.2024);
- iv. Seven years prior to the date of approval of the organization of the selection procedure, the candidate has published as lead author:

In the fields of (1) **PHYSICAL SCIENCES AND ENGINEERING**; (2) **LIFE SCIENCES**:

- ✓ Minimum eight papers (identified as document type/*document type article*, *review* or *proceedings paper*) published in Science Citation Index Expanded journals ranked amongst the first 50% (First [Q1] or Second [Q2] Quartile) in one subfield/Web of Science Category set by the Clarivate Analytics;
- ✓ At least four papers out of the eight papers are in top 25% (Q1 as of the *Journal Impact Factor (JIF)* or the *Article Influence Score (AIS)*), within one subfield/ Web of Science Category set by the Clarivate Analytics;

Note: The most favourable quartiles (Q) corresponding to the values of Journal Impact Factor (JIF) or Article Influence Score (AIS) scientometric indicators from the latest edition of Journal Citation Reports (JCR) available at the time of proposal submission are taken into account.

- v. Good skills in drafting and writing scientific papers;
- vi. Advanced knowledge of English (written as well as spoken) to be able to access and disseminate knowledge from international literature.
- vii. Good organizational, communication and collaborative skills with international and multidisciplinary teams.

Experience in previous similar projects will be considered a major advantage.

B. The selection will consist of:

1. **Step 1 - Evaluation of selection files;**
2. **Step 2 - Structured interview** (in the situation where at least 2 candidates do not register, the competition committee can decide to simplify the procedure and carry out the selection without conducting the interview);
 - *the date and time of the interview*: to be announced at the same time as the results of the selection files evaluation are published;
 - *the place of the interview*: to be announced at the same time as the results of the selection files evaluation are published,

The tests are eliminatory, the minimum score for each test is 50 points.

C. Topics and bibliography:

1. Topics:

- a) knowledge graphs
- b) agent-based modeling
- c) natural language processing
- d) machine learning
- e) data analysis

2. Bibliography:

- 1) CEDEFOP, 2019. Artificial or human intelligence? Digitalisation and the Future of Jobs and Skills: opportunities and risks. <https://doi.org/doi/10.2801/862703>
- 2) de Groot, M., Schutte, J., Graus, D., 2021. Job Posting-Enriched Knowledge Graph for Skills-based Matching.
- 3) Deloitte, 2018. Preparing tomorrow's workforce for the Fourth Industrial Revolution.
- 4) Devlin, J., Chang, M.-W., Lee, K., Toutanova, K., 2019. BERT: Pre-training of Deep Bidirectional Transformers for Language Understanding, in: Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies, Volume 1 (Long and Short Papers). Presented at the NAACL-HLT 2019, Association for Computational Linguistics, Minneapolis, Minnesota, pp. 4171–4186. <https://doi.org/10.18653/v1/N19-1423>
- 5) Dumitrescu, S., Avram, A.-M., Pyysalo, S., 2020. The birth of Romanian BERT, in: Findings of the Association for Computational Linguistics: EMNLP 2020. Presented at the Findings 2020, Association for Computational Linguistics, Online, pp. 4324–4328. <https://doi.org/10.18653/v1/2020.findings-emnlp.387>
- 6) Market Accounting for Workers' Stocks and Gross Flows. *Comput Econ* 50, 21–68. <https://doi.org/10.1007/s10614-016-9577-0>
- 7) Goyal, N., Sachdeva, N., Choudhary, V., Kar, R., Kumaraguru, P., Rajput, N., 2019. Con2KG-A Large-scale Domain-Specific Knowledge Graph, in: Proceedings of the 30th Acm Conference on Hypertext and Social Media (Ht '19). Assoc Computing Machinery, New York, pp. 287–288. <https://doi.org/10.1145/3342220.3344931>
- 8) Hamill, L., Gilbert, N., 2016. Agent-Based Modelling in Economics, 1st edition. ed.

Wiley, Chichester, UK ; Hoboken, NJ.

- 9) ILO, 2021. Changing demand for skills in digital economies and societies: Literature review and case studies from low- and middle-income countries.
- 10) Kant, J.-D., Ballot, G., Goudet, O., 2020. WorkSim: An Agent-Based Model of Labor Markets. JASSS 23, 4. <https://doi.org/10.18564/jasss.4396>
- 11) Khaouja, I., Kassou, I., Ghogho, M., 2021. A Survey on Skill Identification From Online Job Ads. IEEE Access 9, 118134–118153. <https://doi.org/10.1109/ACCESS.2021.3106120>
- 12) le Vrang, M., Papantoniou, A., Pauwels, E., Fannes, P., Vandenstein, D., De Smedt, J., 2014. ESCO: Boosting Job Matching in Europe with Semantic Interoperability. Computer 47, 57–64. <https://doi.org/10.1109/MC.2014.283>
- 13) Peter Elias, 1997. Occupational Classification (ISCO-88): Concepts, Methods, Reliability, Validity and Cross-National Comparability (OECD Labour Market and Social Policy Occasional Papers No. 20), OECD Labour Market and Social Policy Occasional Papers. <https://doi.org/10.1787/304441717388>
- 14) WEF, 2017. Accelerating Workforce Reskilling for the Fourth Industrial Revolution.
- 15) World Bank, 2016. World Development Report 2016: Digital Dividends.
- 16) Yao, K., Zhang, J., Qin, C., Wang, P., Zhu, H., Xiong, H., 2022. Knowledge Enhanced Person-Job Fit for Talent Recruitment, in: 2022 Ieee 38th International Conference on Data Engineering (Icde 2022). Ieee Computer Soc, Los Alamitos, pp. 3467–3480. <https://doi.org/10.1109/ICDE53745.2022.00325>
- 17) Zhang, M., Jensen, K., Sonniks, S., Plank, B., 2022. SkillSpan: Hard and Soft Skill Extraction from English Job Postings, in: Proceedings of the 2022 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies. Presented at the NAACL-HLT 2022, Association for Computational Linguistics, Seattle, United States, pp. 4962–4984. <https://doi.org/10.18653/v1/2022.naacl-main.366>

D. Contents of the competition file:

1. List of all attached documents;
2. Application form addressed to the Rector of UES;
3. Declaration on own responsibility if the applicant has / does not have a spouse or relatives and relatives, up to the third degree inclusive, who are employees of the Academy of Economic Studies in Bucharest in a position of management, control, authority with the

post selected and neither the post to which he applies, is not in a leadership, control position with the spouse / wife or relative and related, until the third grade inclusive, university employees;

4. Statement for the processing of personal data;
5. Copy of the identity document or any other document certifying the identity, according to the law, if applicable;
6. Copy of marriage certificate or proof of the change of name, if the candidate has changed his/her name (proof of change of name);
7. The criminal record or a statement on his own responsibility that he has no criminal record that makes him incompatible with the position for which he is applying;
8. Medical certificate attesting the appropriate state of health issued no later than 6 months before the selection by the family doctor of the candidate or by the qualified health units, or the declaration on his own responsibility, with the obligation to complete the selection file with the medical certificate not later than the date of the first test of the recruitment and selection process, if applicable;
9. Curriculum Vitae in European format, RO/ENG– signed and dated on each page;
10. Copies of documents certifying the level of studies and other documents certifying the completion of specializations, as well as copies of documents proving that the specific conditions proving that the specific conditions for the position have been met;
11. Other documents relevant to the competition.

E. Contact information:

The selection files can be submitted in a literal format until 14.06.2024 at 16:00, at the ASE Registry, in the “Ion Angelescu” Building, Bastille Fall, ground floor, room 0016, or online at the address provided by the contact person.

Contact person: Liviu Adrian Cotfas – e-mail: liviu.cotfas@ase.ro

Petre Caraiani – e-mail: petre.caraiani@fabiz.ase.ro

The requested forms can be found on the website of the Project Management Service with Non-Restructible Financing, Resources section, by accessing the link <https://fondurieuropene.ase.ro/resurse/>

F. The calendar of the selection process::

No.	Activities	Date
1.	Submitting the candidates' competition files at the ASE Registrar's Office and verification of the documents in the file	23.05- 14.06.2024
2.	Selection of application files by the members of the competition committee	17-18.06.2024

3.	Publication of the results of the selection of the application files	19.06.2024
4.	Submission of appeals regarding the results of the selection of application files	20.06.2024
5.	Publication of the results of the appeals	21.06.2024
6.	Interview	24 - 26.06.2024
7.	Communication of the results after the interview	27.06.2024
8.	Submission of appeals regarding the interview results	28.06.2024
9.	Publication of the results of the appeal	01.07.2024
10.	Publication of the final results	01.07.2024
11.	Appointment to the position	After approval from the Board of Trustees and the Directorate-General for PNRR Management and Coordination