

Bucharest University of Economic Studies

Date: 16th of April, 2025

## ANNOUNCEMENT

Bucharest University of Economic Studies is currently holding a selection process for *one Ph.D. researcher* position within the project „*CauseFinder: Causality in the Era of Big Data and AI and its applications to innovation management*”- 760049/23.05.2023, grant application no. 268/29.11.2022

The employment offered for this position is part-time, with a maximum of **80** working hours per month, which may be unevenly distributed.

The gross hourly wage for this position is 86,50 lei per hour.

The individual contract of employment will be concluded for a fixed-term period of time until the 30<sup>th</sup> of June, 2026.

**A. In order to enter the selection, candidates need to fulfil the following general and specific conditions:**

**1. General conditions:**

- a) has Romanian citizenship, citizenship of other member states of the European Union, of states belonging to the European Economic Area and/or foreign states as defined by art. 2 lit. a) of GEO 194/12.12.2002 with subsequent amendments and completions, respectively persons who do not have Romanian citizenship, citizenship of another EU member state or citizenship of the Swiss Confederation;
- b) has the minimum age regulated by the legal provisions;
- c) has full capacity;
- d) has a relevant state of health for the position he is applying for.
- e) meets the conditions of education and, where appropriate, seniority or other specific conditions by the requirements of the post to be filled;
- f) has not been convicted of a crime against humanity, against the State or authority, or of 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 forgery or corruption, or of an offence committed with intent which would make him or her incompatible with the performance of his or her duties, unless he or she has been rehabilitated.

**2. Specific conditions:**

- a) level of studies: education completed with a master's degree;
- b) area of studies: economics, business administration, cybernetics and statistics, economic informatics, finance or similar;
- c) PhD student enrolled in the institutions organizing doctoral studies in Romania (the list of eligible institutions can be consulted here: [https://www.edu.ro/IOSUD\\_2022](https://www.edu.ro/IOSUD_2022))
- d) Other specific conditions:
  - i. good knowledge of English- at an advanced level;

- ii. experience in data analysis, statistical and econometric modeling, using Python;
- iii. solid knowledge of statistics and probability, graph theory, causal modeling, probabilistic reasoning in AI, anomaly detection in data mining;
- e) Skills:
  - i. good organisational, communication and collaboration skills with international and multidisciplinary teams;
  - ii. good skills in developing and writing scientific papers.

### **3. Responsibilities:**

- i. collaborate with the members of the project team in order to carry out the assigned activities as required by the project such as research activities, reports, studies and scientific articles;
- ii. create algorithms, code snippets and application of statistical methods to achieve the desired results;
- iii. collaborate with the project team in order to disseminate the partial and final results;
- iv. support the project team in order to achieve the objectives of the project.

### **B. The selection process will consist of:**

#### **Step 1: Evaluation of the files submitted by the candidates;**

**Step 2: Structured interview** (if there are not at least 2 candidates, the selection committee may decide to simplify the procedure and make the selection without the interview stage):

- *The date and time of the interview* will be communicated concurrently with the results of the evaluation of the files submitted by the candidates;
- *The place of the interview* will be communicated simultaneously with the results of the evaluation of the files submitted by the candidates.

The evaluation samples are eliminatory; the minimum score to be obtained for each sample is 50 points.

### **C. Topics and bibliography:**

1. Artificial intelligence
2. Causal modeling of big data
3. Knowledge graphs
4. Machine learning
5. Explainable artificial intelligence
6. The innovation life cycle.

#### **1. Bibliography:**

1. GDELT project. <https://www.gdeltproject.org>
2. Charlie Loyd. „Near-realtime Earth observation resources”. <https://planet.parts>
3. Gregor Leban, Blaž Fortuna, Janez Brank, Marko Grobelnik. „Event registry: learning about world events from news”. Proceedings of the 23rd International Conference on

World Wide Web, Seoul, Korea, 7–11 April 2014, pp. 107–110.  
<http://eventregistry.org/>

4. Judea Pearl. Causality. Cambridge University Press, 2009.
5. Emre Kiciman, Scott Counts, Melissa Gasser. „Using longitudinal social media analysis to understand the effects of early college alcohol use”. Proceedings of the Twelfth International Conference on Web and Social Media, ICWSM 2018, Stanford, California, USA, June 25–28, 2018, pp. 171–180.
6. William L. Hamilton, Payal Bajaj, Marinka Zitnik, Dan Jurafsky, Jure Leskovec. „Embedding logical queries on knowledge graphs”. Va fi publicat în NIPS 2018. <https://arxiv.org/abs/1806.01445>, accesat în 6 noiembrie 2018.
7. Ian Goodfellow, Yoshua Bengio, Aaron Courville. Deep Learning. The MIT Press, 2016.
8. Roman, Dumitru, et al. „The euBusinessGraph ontology: A lightweight ontology for harmonizing basic company information.” Semantic Web 13.1 (2022): 41-68.
9. Gulnes, Maren Parnas, Ahmet Soylu, Dumitru Roman. „A graph-based approach for representing, integrating and analysing neuroscience data: The case of the murine basal ganglia.” Data Technologies and Applications (2021).
10. Soylu, Ahmet, et al. „TheyBuyForYou platform and knowledge graph: Expanding horizons in public procurement with open linked data.” Semantic Web Preprint (2022): 1-27.

**D. Contents of the competition file to be submitted by candidates:**

1. A record of the enclosed documents
2. Application for the recruitment and selection process addressed to the Rector of ASE;
3. Copy of the identity document or any other document attesting the identity, according to the law, as the case may be;
4. Copy of marriage certificate or proof of name change, if the candidate changed his name (proof of name change);
5. The criminal record or a self-declaration that it has no criminal record that makes it incompatible with the position for which it is applying;
6. Medical certificate attesting the appropriate health status issued no more than 6 months prior to the selection by the family doctor of the candidate or by the competent medical units, or the declaration on its own responsibility, with the obligation to fill in the selection file with the medical certificate at the latest by the date of the first test of the recruitment and selection process, if applicable
7. Declaration on own responsibility if the candidate has or does not have a husband/wife or relatives and affines, up to the III-th degree inclusively, who are employees of the Academy of Economic Studies of Bucharest in a position of leadership, control,

authority with the post taken out for selection and not the post, to which they apply, is not in a position of leadership, control, authority with husband/wife or relatives, up to and including III degree, employees of the University;

8. Statement for the processing of personal data;
9. Curriculum vitae in European format ([www.cveuropean.ro/cv-online.html](http://www.cveuropean.ro/cv-online.html)) – signed and dated on each page;
10. Copies of documents that certify the completed level of education and any other additional documents that attest to the completion of specializations, as well as copies of documents certify the fulfilment of the specific conditions required for the position, as outlined in Chapter A, point 2.

**E. Contact information:**

- The competition files are due on April 25<sup>th</sup>, 2025, by 13:00 at the BUES Registrar's Office, located in the "Ion Angelescu" Building, Caderea Bastiliei Street, ground floor, room 0016.
- For more information about the recruitment process, please contact: [fondurieuropene@ase.ro](mailto:fondurieuropene@ase.ro)

**F. Recruitment and selection calendar:**

<b>Nr. crt.</b>	<b>Activități</b>	<b>Data</b>
<b>1.</b>	Publicarea anunțului	16.04.2025
<b>2.</b>	Depunerea dosarelor de concurs ale candidaților la Registratura ASE și verificarea documentelor din dosar	25.04.2025
<b>3.</b>	Selecția dosarelor de către membrii comisiei de concurs	28.04.2025
<b>4.</b>	Afișarea rezultatelor selecției dosarelor	29.04.2025
<b>5.</b>	Depunerea contestațiilor privind rezultatele selecției dosarelor	30.04.2025
<b>6.</b>	Afișarea rezultatului soluționării contestațiilor	05.05.2025
<b>7.</b>	Susținerea interviului	06.05.2025
<b>8.</b>	Comunicarea rezultatelor după susținerea interviului	07.05.2025
<b>9.</b>	Depunerea contestațiilor privind rezultatul interviului	08.05.2025
<b>10.</b>	Afișarea rezultatului soluționării contestațiilor	09.05.2025
<b>11.</b>	Afișarea rezultatului final al concursului	09.05.2025
<b>12.</b>	Numire pe funcție	După aprobarea CA