Bucharest University of Economic Studies

ANNOUNCEMENT

Bucharest University of Economic Studies is currently holding a selection process for **2 Postdoctoral Researcher** positions for the ***"AI for Energy Finance (AI4EFin)"*** project-760048/23.05.2023, code 162/15.11.2022.

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 120.75 lei per hour.

The individual contracts of employment will be concluded for a fixed period of 12 months, with an evaluation carried out at the end of the period. There is also a possibility of extension of the contract until 30 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) minimum age stipulated by law;
c) has full capacity;
d) meets the conditions of education and, where appropriate, seniority or other specific conditions by the requirements of the post to be filled;
e) 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: higher education, PhD diploma completed
b) area of studies: economy, business administration, cybernetics and statistics, economic informatics, finance, statistics or similar
c) **Mandatory condition*: The candidate must hold a doctoral degree and have research experience of no more than 8 years full-time equivalent, from the date of award of the first doctoral degree, and, but not exceeding 10 years full-time equivalent under the conditions laid down by the European Research Executive Agency (REA).***

The date of obtaining the first doctoral degree is calculated according to the date of the call.

In the case of this selection process, the date of obtaining the first doctoral degree (the date of the minister's order) should not be prior to 15.09.2014.

d) Other specific conditions:

Responsibilities:

- Conduct research and development in the field of energy finance, focusing on the interdependency of energy and financial markets.
- Collaborate with interdisciplinary teams, including economists, policymakers, and industry experts, to provide insights and guidance for decision-making in energy finance and policy formulation.
- Publish research findings in reputable academic journals and present at conferences/workshops.
- Contribute to quantinar.com and the social media strategy of the research project.

Requirements:

- A Ph.D. degree in a relevant field such as computer science, applied mathematics, statistics, finance, or a related discipline.
- Strong expertise in machine learning, artificial intelligence, and data analysis techniques.
- Extensive knowledge of energy finance, including understanding the interdependency between energy and financial markets.
- Proficiency in programming languages such as Python (preferred) or R.
- Strong analytical and problem-solving abilities.
- Good communication and collaboration skills to work effectively within a multidisciplinary team.

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

C. Topics and bibliography:

1. **Topics:**

    1. Energy Finance
    2. Artificial Intelligence
    3. Explainable deep neural networks
    4. Machine Learning
    5. Risk management

2. **Bibliography:**

1. Bock, K. W. D., Coussement, K., & Lessmann, S. (2020). Cost-Sensitive Multicriteria Ensemble Selection: A Framework for Business Failure Prediction When Misclassification Costs Are Uncertain. *European Journal of Operational Research, 285*(2), 612-630. https://doi.org/https://doi.org/10.1016/j.ejor.2020.01.052
2. Craja, P., Kim, A., & Lessmann, S. (2020). Deep learning for detecting financial statement fraud. *Decision Support Systems*, *139*, 113421. https://doi.org/https://doi.org/10.1016/j.dss.2020.113421
3. Haupt, J., & Lessmann, S. (2022). Targeting customers under response-dependent costs. *European Journal of Operational Research*, *297*(1), 369-379. https://doi.org/https://doi.org/10.1016/j.ejor.2021.05.045
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8. Lux, M., Härdle, W. K., & Lessmann, S. (2019). Data Driven Value-at-Risk Forecasting using a SVR-GARCH-KDE Hybrid. *Computational Statistics*, *35*, 947-981. https://doi.org/10.1007/s00180-019-00934-7
9. Schirmer, M., Eltayeb, M., Lessmann, S., & Rudolph, M. (2022, July 17-23). Modeling Irregular Time Series with Continuous Recurrent Units.*Proceedings of Machine Learning Research* Proc. of the 39th Intern. Conf. on Machine Learning (ICML'2022), PLMR, Baltimore, MD, USA. https://proceedings.mlr.press/v162/schirmer22a.html

10. Srivastava, S., & Lessmann, S. (2018). A comparative study of LSTM neural networks in forecasting day-ahead global horizontal irradiance with satellite data. *Solar Energy*, *162*, 232-247. https://doi.org/10.1016/j.solener.2018.01.005

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. 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;
4. Statement for the processing of personal data;
5. Copy of the identity document or any other document attesting the identity, according to the law, as the case may be;
6. Copy of marriage certificate or proof of name change, if the candidate changed his name (proof of name change);
7. 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;
8. 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;
9. Curriculum vitae in European format (www.cveuropean.ro/cv-online.html) – signed and dated on each page;
10. Copy of the graduation diploma of the faculty;
11. Copy of the master's degree;
12. Copy of the doctor's degree;
13. Possible copies of other documents/acts (if the candidate owns), attesting to the performance of professional specializations/training, certifying the fulfilment of the other specific conditions provided for the occupation of the post, which are referred to in Chapter A, point 2, point d).

E. Contact information:

The competition files will be submitted by March 18, 2024, at 16:00 at the BUES Registrar's Office, located in the "Ion Angelescu" Building, Caderea Bastiliei Street., ground floor, room 0016.

Contact person: University professor Ph.D. Daniel Traian Pele (email: danpele@ase.ro)

The requested form models can be found on the website of the Non-reimbursable Project Management Service, Resources section, by accessing the link: https://fondurieuropene.ase.ro/resurse/.

F. Selection calendar:

No. crt.	**ACTIVITY**	**Date**
1.	Submitting the candidates' competition files at the ASE Registrar's Office and verification of the documents in the file	Until 18.03.2024 (16:00 time)
2.	Selection of application files by the members of the competition committee	19.03.2024
3.	Publication of the results of the selection of the application files	19.03.2024
4.	Submission of appeals regarding the results of the selection of application files	20.03.2024
5.	Publication of the results of the appeals	21.03.2024
6.	Interview	22.03.2024
7.	Communication of the results after the interview	25.03.2024
8.	Submission of appeals regarding the interview results	26.03.2024
9.	Publication of the results of the appeal	27.03.2024
10.	Publication of the final results	27.03.2024
11.	Appointment to the position	After approval from the Board of Trustees