



Notice

Call for the award of four Research Grants (BI) within the scope of the Project Promoting Success and Reducing Dropout in Higher Education

Referência: 03/BI/2024

1. The University of Lisbon (ULisboa) opens a call to award 4 (four) research scholarships, funded by DGES - European Structural and Investment Funds (FEEL) and the European Social Fund (FSE), within the scope of the project DGES-PPSRAES2023-20 under the following conditions:

2. Scientific Area

Engineering

3. Admission Requirements:

According to Article 10 of the University of Lisbon's Research Scholarship Regulations, national citizens, citizens of other European Union member states, and third-country nationals holding a valid residence permit or long-term resident status, as provided for in Law No. 23/2007 of July 4, amended by Law No. 28/2019 of March 29, or with whom Portugal has reciprocal agreements, may apply.

3.2. Academic Qualifications

Master's students in Engineering.

3.3. Preferential Factors

Advanced knowledge in Data Science.

Fluency in database manipulation.

Experience in training classification models and/or predictors based on machine learning algorithms, their evaluation, and improvement.

4. Application Deadline and Procedure

4.1. The call is open for 10 (ten) working days, from February 26 to March 8, 2024.

4.2. The call will be advertised through the <https://euraxess.ec.europa.eu/jobs> platform and on the University of Lisbon's Portal.

4.3. Applications should be sent to the email: candidaturas.rh@reitoria.ulisboa.pt with the reference of the scholarship being applied for.

4.4. The application must be mandatorily accompanied, under penalty of exclusion, by the following documents:

- a) A request form with the candidate's identification,
- b) Documents proving that the candidate meets the conditions required for the corresponding type of scholarship, namely certificates of qualifications for the academic degrees required.
- c) Candidate's curriculum vitae.
- d) A work report on classification training, previously done by the candidate, alone or as a team member.
- e) Document proving the candidate's enrollment in a course awarding a higher education degree or diploma, or acceptance of the candidate by the entity awarding the degree or diploma.
- f) Declaration on honor that there is no professional activity or service provision that violates the duty of exclusive dedication.
- g) Copy of the civil identification document and, whenever applicable, copy of proof of residence permit or other legally equivalent document, and if the identification document corresponds to the citizen card, the delivery of a copy may be replaced by the display of the same, prior to the conclusion of the contract, if the scholarship is awarded.

4.5. Regarding the qualifications certificate, if the degree was obtained in a foreign institution, it must be recognized by a Portuguese institution in accordance with Decree-Law no. 66/2018, of August 16th and Ordinance no. 33/2019, of January 25th, in its wording in force, on the date of application.

5. Working plan

The activities planned aim to design a system for anticipating dropouts and failure cases at the University of Lisbon. In this context, it is expected to define, implement and validate its design process, in order to deploy anticipation systems adjusted to each school at the university.

In particular, the work will be carried out in 3 steps:

- In the first step, the identification of the data to collect and the processes for collecting, anonymizing, and transforming them, must be identified; after this, the design of data models that best support the anticipation of dropouts and failure situations will be done. This step will return the dataset to be used in the following steps.
- The discovery of student profiles is the goal of the second phase. At the end of this task, we expect to have created models to distinguish between cases of success and unsuccessful. The identification of the variables/factors that best discriminate between the two cases, namely the risk conditions that lead to situations of academic failure and dropouts shall be found. With these models, it will then be possible to identify the different profiles of success and failure.
- Finally, the third phase involves the exploration of algorithms for creating prediction models, making it possible to anticipate the unsuccessful situations identified in the previous phase, in particular situations of academic failure and dropout.

6. Workplace and Scientific Guidance:

Excluding some small trips to and from the different schools in the university, the scholarship will be developed at Instituto Superior Técnico, under the scientific guidance of Professor Cláudia Antunes.

7. Selection Methods and Valuation

7.1 The selection method to be used is curricular evaluation (AC = 50%) and the evaluation of a report referring to the training of classifiers and/or predictors, developed in any academic context in the recent past, called Report (R = 50 %). The Jury reserves, if necessary, the possibility of calling up to five candidates for an interview (E). In this case, for candidates who go through to the interview phase, the first assessment component (AC =35% + R=35%) will weigh 70% and the interview will weigh 30%. The jury may not award the scholarship if a suitable candidate is not found.

7.2 Curricular Assessment (AC) is expressed on a scale of 0 to 20 values, with valuation up to the hundredths; the Report (R) and the Interview (E), if any, are evaluated according to the classification levels of High, Good, Sufficient, Reduced or Insufficient, which correspond, respectively, to the classifications of 20, 16, 12, 8 and 4 values;

7.3. In the candidates' Curriculum Assessment (AC), their skills are assessed considering their experience in accordance with the parameters defined in the Jury's minutes and taking into account the skills expressed by the candidate in the Curriculum Vitae in the following aspects:

Advanced knowledge in Data Science (35%)

Fluency in database manipulation (30%)

Experience in training classification models based on machine learning algorithms, their evaluation and improvement (35%)

7.4 When evaluating the Report, the alignment of the experience demonstrated in the report with the activities to be carried out within the scope of the proposed work plan is objectively and systematically assessed,

7.5 In the interview (E), if carried out, the knowledge and technical skills and behavioral aspects evidenced during the interaction established between the interviewer and the interviewee are evaluated, objectively and systematically.

7.6 Each of the selection methods is eliminatory.

7.6.1 In (AC+R), candidates who do not obtain a classification equal to or greater than 12 points in both components, or the ones who doing it are not ranked in the top 5 places, are excluded.

8. Jury Composition:

President:

- Cláudia Martins Antunes, Associated Professor, Instituto Superior Técnico da Universidade de Lisboa.

Effective members:

- Rui Henriques, Assistant Professor, Instituto Superior Técnico da Universidade de Lisboa.

- Daniel Jorge Viegas Gonçalves, Full Professor, Instituto Superior Técnico da Universidade de Lisboa.

Substitute members:

- Daniel Pedro de Jesus Faria, Assistant Professor, Instituto Superior Técnico da Universidade de Lisboa.
- Sandra Pereira Gama, Assistant Professor, Instituto Superior Técnico da Universidade de Lisboa.

9. Results Publication/Notification

The admission and exclusion list, results of each phase, and the final ranking list of candidates will be published on the University of Lisbon's portal in <https://www.ulisboa.pt>.

9.1 Candidates admitted by the first selection method are invited to carry out the next method, by email sent to the address communicated in their Curriculum Vitae.

9.2 Excluded candidates are notified, by email with delivery receipt sent to the email address communicated in the Curriculum Vitae, for the hearing of interested parties to take place under the terms of the Code of Administrative Procedure.

9.3 The final ranking list is notified to all candidates by email with delivery receipt.

9.4 After the deadline for complaining about the final ranking list, the selected candidate is notified within a maximum period of 10 (ten) working days, to present a written declaration of acceptance of the scholarship, under penalty of, if no valid reason is cited within the aforementioned period, this is equivalent to renunciation or withdrawal from the scholarship.

9.5 In the event of resignation or withdrawal by the selected candidate, the candidate classified in the subsequent position will be notified for the purposes of the provisions of the previous paragraph, if applicable.

10. Scholarship Duration and Monthly Maintenance Allowance

The scholarship amount is €990.98 per month.

The scholarship will last for 8 months, possibly renewable until the end of the project, expected to start on April 1, 2024, on an exclusive dedication basis, in accordance with article 5 of Law no. 40/2004, of 18 August.

The scholarship amount will be €990.98 (nine hundred and ninety euros and ninety-eight cents).

The scholarship holder will benefit from personal accident insurance and, if they are not covered by any social protection scheme, they can ensure the exercise of their right to social security by joining the voluntary social insurance scheme, under the terms set out of the Code of Contributory Regimes of the Social Security Pension System.

The scholarship amount will be paid monthly by bank transfer.

The granting of the scholarship does not generate or entitle a relationship of a legal-employment nature, it is exercised on an exclusive dedication basis and the Scholarship Holder is granted the



Status of Scholarship Holder of the University of Lisbon as set out in the Research Grants Regulations of the University of Lisbon.

11. Applicable Legislation and Regulation

Research Fellow Statute, approved by Law No. 40/2004, of August 18, as amended by Decree-Law No. 123/2019, of August 28.

Regulation on Research Grants of the University of Lisbon, Order No. 6238/2020 published in Diário da República No. 113, IIª series, of June 12, updated by Order No. 8061/2022 published in Diário da República No. 126, IInd series, from July 1st.

Lisbon, February 24th, 2024,

President of the Juri,

A handwritten signature in black ink, which appears to read 'Cláudia Antunes'.

Cláudia Martins Antunes