

1 Research Grant Announcement (M/F)

Call open for applications for a research grant within the framework of project Center for Responsible AI, nr. C645008882-00000055, investment project nr. 62, from the Incentive System “Agendas for Business Innovation”, funded by the Recovery and Resilience Plan and by European Funds NextGeneration EU, under the following conditions:

Scientific Area: Machine Learning

Admission requirements: Candidates who cumulatively meet the following requirements may apply for this grant:

Requirement 1:

- To be a student enrolled in a master degree or integrated master or in an integrated master's program who has already completed the 180 credits corresponding to the first six curricular semesters in the area of Informatics Engineering or related areas, requirement to be proven at the time of signing the contract.

or

- Holder of an academic degree enrolled in a non-academic degree course integrated in the educational project of a higher education institution, developed in association or cooperation with one or more R&D units, requirement to be proven at the time of signing the contract.

Note: In the case of degree holders who are enrolled in non-academic degree courses, the scholarship can only be awarded to those who do not exceed, with this scholarship contract, including possible renewals, an accumulated period of two years in that typology of the scholarship, followed or interpolated.

And

Requirement 2:

Hold a bachelor's degree in Informatics Engineering/Computer Science or related field.

If the degree has been awarded by a foreign higher education institution, it must comply with the provisions of the Decree-Law no. 66/2018, of august 16th, and any formalities established there must be fulfilled until the time of signing the contract.

Activity Outline:

Scholarship holders will work on one of the following topics, within the scope WP6 - Privacy-Preserving AI Systems, selected by agreement between each one of them and the supervisor:

- Development and evaluation of semi-synthetic data generation techniques (e.g. Generative Adversarial Networks) to improve understanding of how machine learning systems work, in particular Large Language Models.
- Development and evaluation of metalearning techniques to improve understanding of machine learning algorithms.

The work plan will be:

- Literature review
- Conceptualization of an approach to the selected problem
- Empirical evaluation of the proposed approach
- Writing a scientific article

Legislation and regulations: Law N.º. 40/2004, of 18th August, in its current wording (Statutes of Scientific Research Fellow) and Regulation of Research Grants of Fundação para a Ciência e a Tecnologia, in force (<https://www.fct.pt/financiamento/programas-de-financiamento/bolsas/>) and Regulation of Research Grants of University of Porto, in force.

Work place: The work will be developed at the Department of Informatics Engineering of the Faculty of Engineering of the University of Porto (FEUP) and Fraunhofer AICOS, under the scientific supervision of Doctor Vítor Manuel Araújo Cerqueira and Carlos Manuel Milheiro de Oliveira Pinto Soares.

Grant duration: Initial duration of **6 months**, with the predicted starting date in **May 2024**, on an exclusive basis eventually renewable but never exceeding the end of the project.

If it is not possible to ensure the duration of 6 months estimated in the previous paragraph, this duration will be adjusted according to the end date of the project, and provided that the minimum duration of 3 consecutive months is guaranteed, in accordance with paragraph 3 of article 6 of the Research Grant Regulations of the Foundation for Science and Technology, I.P.

The eventual renewal of the scholarship will be carried out as determined in article 6 of the Research Grants Regulation of the Foundation for Science and Technology, I.P.

Stipend: The grant stipend amounts to 990,98€ according to the table of values of the grants awarded directly by FCT, I.P. in the Country (<https://www.fct.pt/financiamento/programas-de-financiamento/bolsas/>).

The payment will be made by bank transfer.

Selection procedure:

Curriculum evaluation (50%), which will focus on the merit of the candidate, in which the following factors will be weighted:

1. Academic background (Bachelor's degree in Computer Engineering (maximum 5 points); Bachelor's degree in related fields - up to 2 points); other areas - 0 points;
2. Classification of academic training: average equal to or greater than 16/20 values – 5 points; mean equal to 14/20 values – 3 points; other – 0 points;
3. Laboratory experience in the area mentioned in the admission requirements – up to 5 points; only basic knowledge about Machine Learning – up to 3 points; no laboratory experience or knowledge of Machine Learning – 0 points;
4. Skills in the English language, to be verified through a letter of motivation – up to 5 points.

Candidates will be classified on a scale of 1 to 20 points, and candidates who obtain a score of less than 14 points in the Curriculum evaluation will not be admitted to the interview. In the interview (50%), topics related to the work plan, previous experience, motivation, and the candidate's CV will be discussed.

Selection Jury:

President: Doctor Vítor Manuel Araújo Cerqueira

Effective member: Doctor Moisés Rocha dos Santos

Effective member: Doctor Zafeiris Kokkinoginis

Supplementary member: Professor Carlos Manuel Milheiro de Oliveira Pinto Soares

Supplementary member: Professor Luís Filipe Pinto de Almeida Teixeira

Advertisement of final decision: The results of the evaluation will be released to the candidates by email to the email address indicated in the application process.

Deadline for applications and form of presentation of the applications:

The call is open from **17-04-2024 to 02-05-2024** (until 23h59m, GMT time).

Applications must be formalized by email to vcerqueira@fe.up.pt and to recursoshumanos@fe.up.pt clearly stating the reference **FEUP-BI_NextGenAILL54** and including the following pdf documents: Motivation letter, detailed Curriculum Vitae, Copy of certificates evidencing academic degree, Declaration on honour that the candidate fulfils the requirement contained in article 6 of the Regulation for Research Grants of the Foundation for Science and Technology, I.P. (model below, in case of student enrolled in a non-academic degree course integrated in the educational project of a

higher education institution, developed in association or cooperation with one or more R&D units) and other documents considered relevant by the applicant.

Declaration on honour

I, (identification of the scholarship holder), holder of the Citizen Card / Visa / Residence Permit no. valid until _____, declare under honour, to be in the conditions of no. 5 of article 6º

of the Research Grants from FCT, IP - Regulation No. 950/2019, of 16 December.

Oporto, __/__/__

Signature

(scholarship holder)