

PUBLIC NOTICE

Call for allocation of a Scientist Scholarship

Reference: BII/FhP-24/02

The call for allocation of a *Research Integration Grant* for a Student attending a Master's degree is open and subject to the following conditions:

1. **General scientific field:** Engineering.
2. **Specific scientific field:** Informatics and Computing Engineering
3. **Admission Requirements:** i) Student attending an academic Master's degree in the field of Informatics and Computing Engineering; ii) Knowledge of machine learning techniques and interest in developing such skills; iii) Some experience or interest in machine learning operations (MLOps); iv) Good programming skills (Python) and knowledge in machine learning frameworks (PyTorch or TensorFlow); v) Proficiency in English and excellent communication skills and teamwork.
4. **Work Plan:** The Student will perform research activities within the Intelligent Systems Group on data preparation, machine learning deployment, and fine-tuning topics.
 - 4.1. **Tasks:**
 - Research and select candidate Large Language Models (LLM): investigate open-source LLMs, choosing a subset based on various criteria, and deploy them on our internal infrastructure;
 - Perform comparative analysis: conduct tests to evaluate the performance of chosen LLMs, analyze their suitability for specific tasks, and prepare comprehensive reports with recommendations;
 - Fine-tune an LLM for targeted tasks: explore methods to adapt a chosen model and corresponding data for specific tasks, such as chatbots or summarization, collaborating with the team to achieve the research objectives.
5. **Applicable law and regulation:** Portuguese Statute of the Scientific Research Scholarship Holder [*"Estatuto do Bolseiro de Investigação Científica"*], approved by Law no. 40/2004, of August 18, amended by Decree Law no. 202/2012, of August 27, Law no. 12/2013, of January 29, Decree Law no. 89/2013, of July 9 (hereinafter referred to as the "Statute"), Law no. 123/2019, of August 28 and the Research Scholarships' Regulation of Associação Fraunhofer Portugal Research (hereinafter referred to as the "Regulation").
6. **Place of work:** Fraunhofer Portugal AICOS, Porto, Portugal, under the scientific supervision of PhD Vitor Rolla.

- 7. Scholarship's Duration and Regime:** The scholarship shall have a duration of 5 months, eventually renewable for equal periods of time or until the term of the project, with an estimated starting date of May 2024, according to article 13 of the Regulation and article 3 of the Statute, under exclusivity regime, except for the exceptions expressly set out in nos. 3 and 4 of article 5 of the referred Statute.
([https://www.fraunhofer.pt/content/dam/portugal/fhp/careers/grants/Regulamento Bolsas Fraunhofer Portugal Research 2021.pdf](https://www.fraunhofer.pt/content/dam/portugal/fhp/careers/grants/Regulamento_Bolsas_Fraunhofer_Portugal_Research_2021.pdf))
- 8. Amount of the monthly maintenance allowance:** The amount of the scholarship corresponds to €601,12 as per table of amounts of the scholarships of Associação Fraunhofer Portugal Research (https://www.fraunhofer.pt/content/dam/portugal/fhp/careers/grants/regulamento_bolsas.pdf). The payment of the scholarship shall be made on a monthly basis by wire transfer.
- 9. Selection Procedures:** The selection procedures to be used shall be made based on the following parameters:
A – Current average in the Master's degree; B – Alignment of academic choices with the work to perform; C – Curriculum evaluation in accordance with the objectives of the project. The following percentage weighting shall be given to the selection parameters: $0,2 \times A + 0,3 \times B + 0,5 \times C$.
- 10. Composition of the selection panel:** Chairman: Doctor Inês Nunes de Sousa Soares; Permanent Members: Doctor Luís Filipe Caeiro Margalho Guerra Rosado and Doctor Vitor Guerra Rolla.
- 11. Publication/notification of the results:** The final evaluation results shall be published in a list ordered by the final score and posted in a visible and public place at Fraunhofer, Portugal. The approved applicant shall be notified by email.
- 12. The opening period of the call:** The call is open from 17-04-2024 to 28-04-2024.
- 13. Documents and deadlines for application:** Applications must be submitted by means of an application email with the following documents: *Curriculum Vitae*, required qualifications certificate, and other evidencing documents deemed relevant.
Applications should be delivered during the call's opening period, sent by email with acknowledgment receipt to jobs@fraunhofer.pt, in *pdf* format, by 11:59 p.m. of April 30, 2024.