INESC TEC | Research Initiation Grant (AE2024-0466)
INESC TEC

Job Title	INESC TEC	Research Initiation Grant (AE2024-0466)
Department	CRIIS
Institution	INESC TEC
	PORTO, , Portugal
Date Posted	Nov. 8, 2024
Application Deadline	Nov. 20, 2024
Position Start Date	Nov. 7, 2024
Job Categories	Graduate Student
Academic Field(s)	Engineering - Other
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Apply By Email	
Job Description	

Research Opportunities

Industrial Robotics

Work description

The field of robotics has seen significant advances in recent years, such that current robotic manipulators can perform complex tasks in various use cases. The interaction between humans and robots is a central piece of any robotic system. This grant aims to investigate the design and implementation of an intelligent robotic programming module in medical rehabilitation situations. The

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objective is to use the KUKA LBR iiwa, a commercial robotic arm, to allow control of a patient's arm, helping to carry out the trajectory or implementing resistance to movement Thus, the work of this fellowship will involve:

1. Acquire values ??from the robot's sensors or/and add extra sensors to obtain all the necessary information about the status of the robot arm.
2. Develop the software for the intelligent robotic programming module: implement algorithms (e.g. based on machine learning) for adaptive rehabilitation exercises.
3. Test and evaluate the human-robotic interface in a controlled environment, taking into account factors such as task performance and accuracy and operator comfort.
4. Control the robotic manipulator with the developed API.

Academic Qualifications

- Candidate must be enrolled in a Degree course in Electrical Engineering, IT, or related areas

Minimum profile required

- Candidate must be enrolled in a Degree course in Electrical Engineering, IT, or related areas.
- Candidate must have experience in Java programming.
- Candidate must have knowledge of ROS.

Preference factors

- Experience in MCU and FPGA programming is valued.
- Participation in extracurricular activities in the area of ??digital systems is valued.
- Ease of working with national and international teams.

Maintenance stipend: € 601,12, according to the table of monthly maintenance stipend for FCT grants , paid via bank transfer. Grant holders may be awarded potential supplements, according to a quarterly evaluation process (Articles 19, 21 and 22 of the Regulations for Grants of INESC TEC and Annex II), up to a maximum limit of 50% of the monthly maintenance stipend.

INESC TEC supports costs with registration, enrolment or tuition fees, during the grant duration, under the terms established in the internal document: "Payment of Tuition fees to grant holders".

The grant holder will benefit from health insurance, supported by INESC TEC.

Application Period

Since 07 Nov 2024 to 20 Nov 2024

Centre

Robotics in Industry and Intelligent Systems

Scientific Advisor

Hélio Mendonça

What we offer

- **Multicultural and collaborative environment**
- A multicultural, international and collaborative environment that makes it easier to exchange ideas, work in networks and create synergies.

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- **International projects**
- The possibility of working in international projects with some of the most important companies in the field.
- **Mentoring**
- Mentoring with the best researchers in the fields of electrical and industrial engineering, bioengineering, information technology and physics.
- **Self Improvement**
- The possibility of participating in international conferences, workshops, seminars and vocational training.
- **Other Benefits and Perks**
- Flexible working time, health insurance, discounts in hotels, transportation, etc.
- **Informal Events**
- Annual informal events, such as the multicultural party.

For more information: Click Here

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

Portugal

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