INESC TEC | Researcher (AE2024-0580)
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Job Title	INESC TEC | Researcher (AE2024-0580)
Department	CRAS
Institution	INESC TEC PORTO, , Portugal
Date Posted	Jan. 13, 2025
Application Deadline	Jan. 16, 2025
Position Start Date	Jan. 3, 2025
Job Categories	Graduate Student
Academic Field(s)	Electrical and/or Electronics Engineering - Other Electrical and/or Electronics Engineering - Other
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Job Description	

Research Opportunities

Robotics

Work description

- Development of a sensory payload that can be integrated into a prototype of an unmanned aerial vehicle to be developed.

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- Develop sensor integration and development of multimodal sensor information fusion software to develop a perception system for detecting obstacles and possible collisions and modeling and mapping on the sea surface.
- Development of an inspection system for Unmanned Aerial Vehicles, Development of an inventory management system in an industrial environment using Unmanned Aerial Vehicles - Implement the implementation of algorithms in the ROS framework.
- Exercise a critical spirit in evaluating the process and results obtained.

Academic Qualifications

- Master's degree in Electrical Engineering or related field.

Minimum profile required

- Master's degree in Electrical Engineering and over 3 years of proven experience in the development of robotic platforms in terms of hardware and software.
- Participation in scientific projects and writing scientific documents.

Preference factors

- Over 3 years of experience in developing robotic platforms, their conceptualization and design.
- Previous experience in software development using the ROS and ROS2 frameworks.
- Advanced knowledge of C, C++ and Python programming languages, with an emphasis on applications for robotic systems.
- Experience in 3D modeling using Solidworks.
- Previous experience in using simulation tools, such as Stonefish and Gazebo, for testing and validating robots in virtual environments.
- Practical experience in design and production of PCBs, with knowledge of tools such as KiCad.
- Ability to integrate sensors, actuators and other devices into embedded systems, with experience in communication protocols such as I2C, SPI, UART, CAN and RS-232/RS-485.
- Experience in development with FreeRTOS for embedded systems.
- Experience using version control tools, such as Git, for collaborative software development.
- Familiarity with the ARM Cortex-M architecture.

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Application Period

Since 03 Jan 2025 to 16 Jan 2025

Centre

Robotics and Autonomous Systems

Scientific Advisor

José Miguel Almeida

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.
- **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.

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Contact Information

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

Contact

Portugal

Contact E-mail rh@inesctec.pt