Offre n°2025-08898

Robotics engineer for service robotics experiments in real life scenarios

Type de contrat : Fixed-term contract

Niveau de diplôme exigé : Graduate degree or equivalent

Fonction : Temporary scientific engineer

Contexte et atouts du poste

The position is funded by the PEPR O2R, a national French program to advance research in robotics which reunites several French laboratories in robotics, AI, and Social and Human Sciences.

In this context, the HUCEBOT team in INRIA is leading the project AS3, with the challenge to carry out longitudinal (i.e., several months) experiments of service robotics in real-life scenarios.

The first experiments will be carried out at the INRIA premises, in the laboratory environment, where mobile manipulators (a custom mobile robot and a TIAGO++ robot) will be used to deliver mail and other items in offices, assist and serve people in the cafeteria, and in general interact with visitors and personnel of the laboratory. Later, the experiments will take place in a hospital environment.

The objective of these experiments is to investigate the behavior of the humans around the robots, and also improve the robot's autonomous skills in interaction, control, navigation, manipulation.

The position is open for 2 years but can be extended for 2 more years.

The team is international - English and French speaking. French is not required, although free French classes are available in the institute for non-French speakers.

The laboratory is located in the Science and Technology Campus of the University of Lorraine, next to the Botanical Gardens, at 20 minutes by public transportation or

bike from the Nancy train station and City Center.

Nancy is a University town, with a high quality of life and a vibrant student and expat community.

Mission confiée

The engineer will be responsible for the robotics platforms used in the project (custom mobile robots, Tiago++, but potentially also humanoid G1), making sure the contributions from all the partners are integrated at the software level on the robot. He will also supervise all the experiments, making sure the platform behaves safely in the real environment.

To this end, an important objective will be to develop a suitable teleoperation interface station that enables the engineer to supervise the robot, which will have a variable level of autonomy: the engineer will have to teleoperate the robot during its tasks in case of issues and unpredictable situations (or, according to an experimental protocol that will be decided with the scientific team). The engineer will have to develop the software running on the robot, mostly improving on the existing software that is used and developed by the team for navigation, control, and manipulation. Running the experiments in the lab will require potentially deploying environmental sensors and handling network issues (changes in the network, delays, etc.).

An important task will be to assist the other researchers in the team to improve and integrate on the robots the perception, control, interaction and learning skills that make it possible for the robot, at some point, to work autonomously. To do so, the candidate should like robot learning, HRI, and collaborative work.

All the development will be in ROS/ROS2.

Principales activités

- Write code to perform experiments with robots
- Write software documentation
- Write an annual activity report
- Conduct experiments in the real environment, with real robots, such as Tiago++
- Participate to national (PEPR) and European projects events (meetings, hackathons) when appropriate

Compétences

- Experience with machine learning, vision, or real robots is necessary.

- Familiarity with robotic platforms (e.g., ROS/ROS2, Gazebo), sensors, cameras, and hardware.
- Proficiency in programming languages such as C/C++ and/or Python is required.
- Ability to work independently and as part of a team.
- Good communication and writing skills in English.

Avantages

- Subsidized meals
- Partial reimbursement of public transport costs
- Leave: 7 weeks of annual leave + 10 extra days off due to RTT (statutory reduction in working hours) + possibility of exceptional leave (sick children, moving home, etc.)
- Possibility of teleworking (after 6 months of employment) and flexible organization of working hours
- Professional equipment available (videoconferencing, loan of computer equipment, etc.)
- Social, cultural and sports events and activities
- Access to vocational training
- Social security coverage

Rémunération

Remuneration will be determined according to degree and years of experience, from €2692.00 gross per month.

Informations générales

- **Thème/Domaine :** Robotics and Smart environments
  Software engineering (BAP E)
- **Ville :** Villers lès Nancy
- **Centre Inria :** Centre Inria de l'Université de Lorraine
- **Date de prise de fonction souhaitée :** 2025-09-01
- **Durée de contrat :** 2 years
- **Date limite pour postuler :** 2025-06-07

Contacts

- **Équipe Inria :** LARSEN
- **Recruteur :**
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A propos d'Inria

Inria est l’institut national de recherche dédié aux sciences et technologies du numérique. Il emploie 2600 personnes. Ses 215 équipes-projets agiles, en général communes avec des partenaires académiques, impliquent plus de 3900 scientifiques pour relever les défis du numérique, souvent à l’interface d’autres disciplines. L’institut fait appel à de nombreux talents dans plus d’une quarantaine de métiers différents. 900 personnels d’appui à la recherche et à l’innovation contribuent à faire émerger et grandir des projets scientifiques ou entrepreneuriaux qui impactent le monde. Inria travaille avec de nombreuses entreprises et a accompagné la création de plus de 200 start-up. L'institut s'e?orce ainsi de répondre aux enjeux de la transformation numérique de la science, de la société et de l'économie.

L'essentiel pour réussir

Master's degree (or equivalent) in Robotics, AI, Computer Science, or a related field.

Very good programming skills (C++, python).

Love working with real robots.

Not afraid of challenging projects.

Attention: Les candidatures doivent être déposées en ligne sur le site Inria. Le traitement des candidatures adressées par d'autres canaux n'est pas garanti.

Consignes pour postuler

Sécurité défense :
Ce poste est susceptible d’être affecté dans une zone à régime restrictif (ZRR), telle que définie dans le décret n°2011-1425 relatif à la protection du potentiel scientifique et technique de la nation (PPST). L’autorisation d’accès à une zone est délivrée par le chef d’établissement, après avis ministériel favorable, tel que défini dans l’arrêté du 03 juillet 2012, relatif à la PPST. Un avis ministériel défavorable pour un poste affecté dans une ZRR aurait pour conséquence l’annulation du recrutement.

Politique de recrutement :
Dans le cadre de sa politique diversité, tous les postes Inria sont accessibles aux personnes en situation de handicap.