



Offre n°2024-07530

Robotics Junior Engineer

Type de contrat : Fixed-term contract

Contrat renouvelable : Oui

Niveau de diplôme exigé : Graduate degree or equivalent

Fonction : Temporary scientific engineer

Niveau d'expérience souhaité : Recently graduated

A propos du centre ou de la direction fonctionnelle

The Inria Grenoble - Rhône-Alpes research center groups together almost 600 people in 22 research teams and 7 research support departments.

Staff is present on three campuses in Grenoble, in close collaboration with other research and higher education institutions (Université Grenoble Alpes, CNRS, CEA, INRAE, ...), but also with key economic players in the area.

Inria Grenoble - Rhône-Alpes is active in the fields of high-performance computing, verification and embedded systems, modeling of the environment at multiple levels, and data science and artificial intelligence. The center is a top-level scientific institute with an extensive network of international collaborations in Europe and the rest of the world.

Contexte et atouts du poste

RobotLearn aims to develop socially assistive robots with the capacity to perform multi-person interactions and open-domain dialogue. We conceive innovative methods and algorithms for computer vision, audio processing, and sensor-based control for socially-aware robots based on modern statistical- and deep learning to ground the required social robot skills.

Our scientific ambition of RobotLearn is to train robots to acquire the capacity to look, listen, learn, move, and speak in a socially acceptable manner. This is being achieved via a fine tuning between scientific findings, development of practical algorithms and associated software packages, and thorough experimental validation. RobotLearn team members plan to endow robotic platforms with the ability to perform physically unconstrained and open-domain multi-person interaction and communication.

The roadmap of RobotLearn is twofold: (i) to develop machine learning techniques for the temporal and spatial alignment of audio and visual data, variational Bayesian methods for unimodal and multimodal tracking of humans, and deep learning architectures for audio and audio-visual speech enhancement, and (ii) to explore novel scientific research opportunities at the crossroads of discriminative and generative deep learning architectures, Bayesian learning and inference, computer vision, audio/speech signal processing, spoken dialog systems, and robotics.

The paramount applicative domain of RobotLearn is the development of multimodal and multi-party interactive methodologies and technologies for social (companion) robots.

Mission confiée

The RobotLearn team offers a development engineer position to work in the field of multi-modal human-robot interaction. The recruited engineer will have the following missions: port the deep learning and other algorithms and software onto a robotic platform; conduct experiments involving the robotic platform and participants; ensure software robustness and re-usability; prepare software for data collection and data annotation. The recruited engineer will work in close collaboration with the group members (researchers, PhD students, and development engineers).

Principales activités

- Developing software for robotic applications that is robust and re-usable.
- Porting the software onto a robotic platform and validate it via experiments.
- Update existing software to exploit recent features of 3rd party software such as PyTorch and ROS.

Compétences

The candidates should have excellent programming skills in Python, and be fluent in English, both written and spoken. The following expertise is highly welcome: working with ROS (1 and 2) and developing ROS modules, software development using PyTorch, C++, working with Linux (command line, shell scripting), and cooperative software development (Git, CI, testing, ...).

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 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

Informations générales

- **Thème/Domaine** : Robotics and Smart environments
Software Experimental platforms (BAP E)
- **Ville** : Montbonnot
- **Centre Inria** : [Centre Inria de l'Université Grenoble Alpes](#)
- **Date de prise de fonction souhaitée** : 2024-07-01
- **Durée de contrat** : 6 months
- **Date limite pour postuler** : 2024-06-30

Contacts

- **Équipe Inria** : [ROBOTLEARN](#)
- **Recruteur** :
Alameda Pineda Xavier / xavier.alameda-pineda@inria.fr

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'efforce ainsi de répondre aux enjeux de la transformation numérique de la science, de la société et de l'économie.

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.