Offer #2025-09080

Computer Vision: PhD thesis on study of Vision Foundation Models

Contract type : Fixed-term contract

Level of qualifications required : Graduate degree or equivalent

Fonction : Temporary scientific engineer

Level of experience : Recently graduated

Context

A phd position is open in Astra-vision, the computer vision group of ASTRA, a newly-created joint Valeo+Inria research team on **autonomous and safe driving**. The research will take place in the context of a collaboration between valeo.ai, an international team conducting AI research for Valeo automotive applications, in the Astra-vision group that focuses on **Vision and 3D Perception for Scene Understanding**. The candidate will be located in the Inria office, in central Paris.

Assignment

This PhD project focuses on advancing *vision foundation models* for robust and generalizable scene understanding. The candidate will explore large-scale pretraining strategies, multimodal supervision (e.g., image-text or image-depth), and techniques for transferring knowledge across domains and tasks. The research will address fundamental challenges such as domain shifts, data efficiency, and interpretability of large vision models. The candidate will contribute to designing scalable architectures and training protocols, with potential applications in areas such as 3D perception, robotics, or autonomous systems. This is an exciting opportunity to work at the frontier of modern computer vision and deep learning, with strong theoretical and experimental components.

Aside from close interactions with the supervisors both at Inria and valeo.ai, the applicant student is expected to actively participate in group readings, seminars, discussions, team spirit, etc.

Main activities

The precise outline of the work will be refined with the candidate.

Skills

Required skills:

- Great knowledge of Computer Vision and Deep Learning
- Knowledge of the main deep vision architectures
- Ability to read and analyse a scientific article
- Experience of some of the main deep frameworks
- Great coding ability
- Prior scientific experience is a plus
- The intern must be fluent in english

Please also ensure that current diplomacy policies allow your venue on the french territory given the current special sanitary conditions.

Benefits package

- Subsidised catering service
- Partially-reimbursed public transport
- Flexible working hours
- Sports facilities

General Information

- **Theme/Domain :** Statistics (Big data) (BAP E)
- **Town/city :** Paris
- **Inria Center :** Centre Inria de Paris
- **Starting date :** 2025-10-01
- **Duration of contract :** 3 years
- **Deadline to apply :** 2025-07-26

Contacts

- **Inria Team :** ASTRA
- **Recruiter :**
  De Charette Raoul / raoul.de-charette@inria.fr

About Inria

Inria is the French national research institute dedicated to digital science and technology. It employs 2,600 people. Its 200 agile project teams, generally run jointly with academic partners, include more than 3,500 scientists and engineers working to meet the challenges of digital technology, often at the interface with other disciplines. The Institute also employs numerous talents in over forty different professions. 900 research support staff contribute to the preparation and development of scientific and entrepreneurial projects that have a worldwide impact.

Instruction to apply

Defence Security :
This position is likely to be situated in a restricted area (ZRR), as defined in Decree No. 2011-1425 relating to the protection of national scientific and technical potential (PPST).Authorisation to enter an area is granted by the director of the unit, following a favourable Ministerial decision, as defined in the decree of 3 July 2012 relating to the PPST. An unfavourable Ministerial decision in respect of a position situated in a ZRR would result in the cancellation of the appointment.

Recruitment Policy :
As part of its diversity policy, all Inria positions are accessible to people with disabilities.