Offer #2025-08609

INTERNSHIP Fairness in Image and Video Generation Methods

Level of qualifications required : Master's or equivalent

Fonction : Internship Research

About the research centre or Inria department

The Centre Inria de l'Université de Grenoble 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.

The Centre Inria de l'Université Grenoble Alpe 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.

Context

Collaboration RobotLearn and the start-up Veeton

Main activities

Context

Recent advancements in deep generative models, particularly diffusion-based text-to-image and text-to-video models, have opened up new possibilities for creative and practical applications. These methods are increasingly being used for editing tasks such as virtual try-on, image restoration, and content transformation. However, a critical issue lies in their potential to exhibit biases that lead to unfair performance across different demographic groups. For example, these models may not perform equally well for different age groups, genders, or morphologies, resulting in outcomes that may perpetuate stereotypes or exclude certain groups. Addressing this issue is essential for ethical deployment and ensuring inclusivity in generative model applications.

Project Objectives

The aim of this project is to study the biases inherent in image and video generation methods, with a particular focus on editing tasks like virtual try-on. These tasks often reveal disparities in performance due to the underlying data distributions and model architectures. The candidate will analyze potential unfair performance across demographic groups and propose countermeasures to mitigate these biases. By designing fairer editing methods, the project seeks to contribute to the broader goal of responsible AI development.

Potential extension as a PhD position or engineering contract

Skills

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- Strong programming skills in Python and PyTorch.
- Familiarity with computer vision, probability, and deep generative models.
- Solid understanding of mathematics and statistical bias analysis.
- Experience with software development tools like GitHub or GitLab.
- Good communication skills, initiative, and organizational abilities.

Benefits package

- Subsidized meals
- Partial reimbursement of public transport costs
- Leave
- Possibility of teleworking and flexible organization of working hours

Remuneration

€4.35 per hour of actual presence at 1 January 2024.

About 590€ gross per month (internship allowance)

General Information

- **Theme/Domain :** Vision, perception and multimedia interpretation
- **Town/city :** Montbonnot
- **Inria Center :** Centre Inria de l'Université Grenoble Alpes
- **Starting date :** 2025-03-01
- **Duration of contract :** 6 months
- **Deadline to apply :** 2025-04-30

Contacts

- **Inria Team :** ROBOTLEARN
- **Recruiter :**
  Lathuiliere Stephane / stephane.lathuiliere@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.

> **Warning** : you must enter your e-mail address in order to save your application to Inria. Applications must be submitted online on the Inria website. Processing of applications sent from other channels is not guaranteed.

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.