

Research topics	Machine Learning, Large Language Models
Position (M/F)	Research Engineer
Reference offer	DS/PM/EFELIA-LLM/102023
Research Department	Data Science
Publication date	09/10/2023
Start date	ASAP
Duration	Fixed Term Contract (18 months)

Description

The Data Science Department at EURECOM, Sophia-Antipolis France, invites applications for a Research Engineer position. The candidate will work as part of a department-wide project, which aims at developing our research activities on large language models (LLMs).

We are looking for fresh, ambitious and hard-working software engineers with a clear passion for turning ideas in the field of machine learning into fully-functional prototypes, demonstrators, and systems, using cutting edge machine learning libraries, and computing facilities.

The position is funded by a French National project on Artificial Intelligence, and targets the development of LLMs in several flavors. Our first goal is to target an audience of EURECOM staff, including researchers and administration, to offer novel conversational agents that can use internal, multimodal information to interact with users for Q&A, summarization, in-filling and many other tasks. A second ambitious goal is to offer innovative educational services to EURECOM students, by designing novel conversational agents instructed to follow Socratic interactions. Such conversational agents will be augmented with teaching material (lecture notes, slides, video lectures, code from labs, etc...) which should be used and referenced in conversations.

The successful candidate will work in close relation with professors, postdoctoral researchers and Ph.D. candidates, and will lead contributions to: (i) the implementation and deployment of state-of-the art, open-source LLMs, including inner components (novel attention mechanisms, novel tokenization schemes, key-value caching, to name a few) and outer components (such as retrieval augmented generation) (ii) the definition of appropriate methodologies for training and, most importantly, fine-tuning of our internal LLMs, (iii) the definition of appropriate benchmarks and validation methodologies, and (iv) communication to a public of developers, engineers and practitioners through technical blogs, online demonstrators (e.g. HuggingFace spaces, on-site deployment) of our results, as well as to demonstrate the various releases of the prototype to EURECOM management teams.

Since our activities are fueled by an important public fund, in the context of the French Government plan for AI, called the 3IA, the successful candidate will also participate to project meetings and reviews, as well as public demonstrations of research results.

Requirements

- Education Level / Degree: Ms.c. or Ph.D. degree in Computer Science, Applied Mathematics, Physics, or a closely related area with a strong background on algorithmic development and software engineering
- Applicants should have a good background on machine learning, a taste for learning new topics related to machine learning research, as well as proven experience in the design of solid software engineering artifacts
- Applicants should have strong communication skills, with target audiences ranging from the scientific and academic community, as well as engineers and product managers
- The working language in the department is English.



Application

The application must include:

- Detailed curriculum, including (if available) a list of software engineering projects, public demonstrators, and contributions to open-source projects
- a cover letter describing the applicant's interests
- the contact details of 2/3 persons that can provide references about the candidate
- the transcripts of courses taken at graduate (and optionally undergraduate) level

Applications should be submitted by e-mail to Pietro.Michiardi@eurecom.fr and secretariat@eurecom.fr with the reference : **DS/PM/EFELIA-LLM/102023**

Applications will be accepted until the position is filled.

About EURECOM

EURECOM is a major Engineering School and a Research Center in digital sciences founded in 1991 as a consortium in the international technology park of Sophia Antipolis. The IMT is a founding member of the GIE. Teaching and research activities are organized around 3 promising fields: digital security, communication systems and Data Science.

EURECOM has a staff of 150 (researchers and support teams) and welcomes 400 international students on the Campus Sophia Tech, the largest information science and technology campus of the region. EURECOM enjoys a privileged geographical environment on the French Riviera (Côte d'Azur), between sea and mountains, at the heart of a dynamic and multidisciplinary ecosystem that promotes high-level scientific and technological innovation.

Social advantages

- Attractive salary - Corporate saving plans
- Private retirement plan (employer participation of 100%)
- Employee profit sharing policy
- Company health insurance (mutuelle) with high levels of guarantees for the whole family (employer participation of 60%)
- Restaurant vouchers : value 10,50 euros (employer contribution of 60%)

EURECOM has a dynamic policy in terms of inclusion and quality of life at work, committed to diversity and gives the same consideration to all applications, without discrimination.

EURECOM has a "Mission Handicap" policy. All our positions are open to people with disabilities. A designated disability referent welcomes and provide support to employees and students suffering from a disability. He puts in place the necessary arrangements and makes positive commitments in favour of a personalized integration.

EURECOM, as part of its Annual Gender Equality Plan, practices inclusive recruitment without any kind of gender discrimination. The conditions of employment are identical for women and men. In order to promote the diversity in its teams, EURECOM encourages male applications for administrative positions, traditionally occupied by women, and female applications for teaching/research positions, traditionally occupied by men.

EURECOM carries out positive actions within the framework of its CSR policy. A CSR referent steers EURECOM's policy in terms of CSR and energy transition (electric charging stations, solar panels, selective sorting, etc.).