

## **POSITION TITLE**

## **Associate Professor in Machine Learning for Natural Language Processing**

## **TELECOM PARIS**

Télécom Paris, a school of the IMT (Institut Mines-Télécom) and a founding member of the Institut Polytechnique de Paris, is one of the top 5 French general engineering schools. The mainspring of Télécom Paris is to train, imagine and undertake to design digital models, technologies and solutions for a society and economy that respect people and their environment. The school is committed to providing an environment conducive to the development of all students and research professors, and is voluntarily and sustainably committed to an ambitious plan for social and ecological transition. It is working to increase the number of female research professors and to reduce the disparities between men and women.

An inclusive campus on a "human scale" but with a strong international component, Télécom Paris is recognized for its proximity to companies. This public school guarantees excellent employability in all sectors and is the leading engineering school for the entire digital vertical (from hardware layers to uses).

With its excellent teaching and innovative pedagogy, Télécom Paris is at the heart of a unique innovation ecosystem, based on interaction and the importance of project mode in its training on the one hand, and its interdisciplinary research on the other. Its teacher-researchers are affiliated with two research laboratories: on the one hand, the LTCI laboratory, which is presented by the HCERES as a flagship unit in the field of digital sciences with remarkable international influence; and on the other hand, the i3 laboratory, Institut interdisciplinaire de l'Innovation (I3 - UMR 9217 of the CNRS), which pursues a multidisciplinary research program focused on innovation in the framework of a collaboration with the École Polytechnique and Mines Télécom Paris is positioned as an open-air laboratory for all the major technological and societal challenges: artificial intelligence, quantum computing, IOT, cybersecurity, large-scale digital equipment (Cloud), 5G/6G, Green IT.

## **SCIENTIFIC CONTEXT**

The Information Processing and Communication Laboratory (LTCI) is Telecom Paris' in-house research laboratory. Since January 2017, it has continued the work previously carried out by the CNRS joint research unit of the same name. The LTCI was created in 1982 and is known for its extensive coverage of topics in the field of information and communication technologies. The LTCI's core subject areas are computer science, networks, data science, signal and image processing and digital communications. The laboratory is also active in issues related to systems engineering and applied mathematics.

The open position is part of the research strategy of LTCI and Télécom Paris around Data Science, Machine Learning and Artificial Intelligence. The position will be hosted by the Statistics, Signal processing and Machine Learning (S²A) team, within the Images, Data & Signals department. In particular, research at the S²A team is characterized by a fruitful interplay between statistics and probabilistic modeling, machine learning, signal processing, audio data analysis and social data analysis. The associate professor will contribute as well to the dynamics of the Institut Polytechnique de Paris with a very rich eco-system where projects in Data Science abound, whether it be between academic teams or with industrial groups.



## **POSITION TITLE**

**Associate Professor in Machine Learning for Natural Language Processing** 

## PREFERRED SCIENTIFIC EXPERTISE

The recruited researcher will develop their research in machine learning for Natural Language Processing. Their work should hence be within the processing of natural language as text, speech, or information retrieval, notably in one or several of the following sub-research areas:

- Large Language Models
- Generative models, Conversational AI
- Bias and Explainability in AI
- Frugal Machine Learning

## **JOB DESCRIPTION**

## MAIN RESPONSIBILITIES AND DUTIES

- 1. Applicants should participate in the design and implementation of courses in their scientific field.
- 2. They should conduct research.
- 3. They should participate in the development of partnerships, collaborations, and contractual agreements in their scientific field.

### **POSITION RESPONSIBILITIES**

#### Teaching:

In collaboration with the other faculty members of the department:

- Provide courses consistent with areas of knowledge, skills-set, and departmental needs;
- Teach labs and tutorials for undergraduate and graduate students;
- Serve on juries for prospective students who are applying for engineering courses, specialized masters, etc.;
- Contribute to the analysis of training needs;
- Design and organize teaching activities for undergraduate and graduate students;
- Design and implement project-based teaching;
- Supervise student projects;
- Develop courses and teaching tools in the above-mentioned field.

### Research:

- Develops research activity in the scientific field concerned.
- Participates in projects involving partners from the Institut Polytechnique de Paris, the Institut Mines-Télécom or outside, from the academic or business worlds, in particular within the framework of structuring projects or national or European projects;
- Develops international relationships with university teams, research centers and establishes contractual collaborations.
- Carry out collaborative and industrial research contracts;
- Gets involved in the search for new research contracts and new patrons
- Explore and develop partnerships within the industry and establish contractual agreements.
- Writes research projects and responds to calls for projects.

### **Coordination:**

- Participate in and contribute to the scientific activities of the Group (seminars, presentations, juries, etc.).

#### Fostering the recognition of Telecom Paris and the Institut Polytechnique de Paris:

- Disseminate research findings via scholarly writing and publication;



## **POSITION TITLE**

## **Associate Professor in Machine Learning for Natural Language Processing**

- Lead presentations and seminars;
- Take an active role in scholarly and professional organizations;
- Maintain close relations with academic institutions, research centers, and companies.

#### Other responsibilities:

- Participate in the scientific, pedagogical, and management activities of the department and/or institution;
- Where appropriate, direct and manage the staff placed under their responsibility or supervision;
- Report on the activities and results of the tasks for which they are responsible.

### **SKILLS**

### Required skills, experience, and knowledge:

- In-depth theoretical or applied knowledge in their field of expertise
- An excellent command of spoken and written English
- If the candidate is does not speak French, from the moment they are hired they must commit to reaching a professional proficiency of French as quickly as possible while under contract

## Preferred skills, experience, and knowledge:

- Post-doctoral or international experience in an academic or industrial laboratory is appreciated
- Teaching experience

## Other abilities and skills:

- The ability to be an active team member in a diverse faculty, staff, and student environment
- Strong teaching, pedagogical, and mentoring capabilities Superb written and interpersonal communication skills

## **REQUIRED QUALIFICIATIONS**

## Candidates with one or more of the following required qualifications may apply:

- Doctorate or equivalent
- Civil servant recruited through the École Polytechnique or ENA or former student of the École Normale Supérieure and ≥ 3 years of professional experience
- Holds a post-graduate degree from an engineering, business, or management school and has ≥ 5 years of professional experience
- Holds a post-graduate degree and has ≥ 5 years of professional experience
- Is a high-level business executive with ≥ 8 years of professional experience

## **DESIGNATION AND CAREER DEVELOPMENT**

The person recruited will obtain the title of Associate Professor. He/she will be encouraged to obtain, as soon as possible, his/her HDR (habilitation to direct research). The HDR is one of the prerequisites to apply for promotion to Professor.



## **POSITION TITLE**

## **Associate Professor in Machine Learning for Natural Language Processing**

### APPLICATION INSTRUCTIONS

Send the documents below via the career site:

- a detailed CV
- a cover letter
- an activity report (table of activities) in research (supervision, problem,...), teaching (title, volume,...) and collective tasks (max 4 pages)
- teaching description (summary of activities, university-level teaching and continuing education project) (max 4 pages)
- research description (summary and results of activities, research project) (max 4 pages)
- copy of the 3 best publications, list of publications
- names and email addresses of two qualified persons who can give an informed opinion on the application

Contacts: Matthieu Labeau (matthieu.labeau@telecom-paris.fr), Stephan Clémençon (stephan.clemencon@elecom-paris.fr), Florence Tupin (florence.tupin@telecom-paris.fr).

## **SELECTION**

The selection process consists of 4 steps:

- Elimination of applications that do not have the required qualifications
- Exchange with the host team to establish a list of shortlisted candidates
- Preliminary interview with Human Resources
- Hearing by the recruitment committee and ranking of the selected candidates
- Final interview with the Director of Télécom Paris

## ADDITIONAL INFORMATION

Date posted: 2nd January 2024

Contract type: CDI (permanent contract)

Job location: Télécom Paris, 19 Place Marguerite Perey, Palaiseau 91120, France

Department/Unit: IDS Department Superior/Supervisor: Department Head

Category / job title: II – C

Categories / titles agents can apply for: II – C

## How to apply

Apply via the careers website: <u>URLRECRUITEE</u>
Application deadline: 13th March 2024

Telecom Paris is an equal-opportunity employer.
All our positions are open to individuals with disabilities.