Dept. of Computer Science
Télécom SudParis
IP Paris, France

Post-doctoral position:
Trustworthy Data Pipelines and AI Models for AIoT Applications

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- Location: Télécom SudParis, France
- Application Deadline: 1 April 2024
- Starting Date: September 2024 (negotiable)
- Contract Duration: 1 year (with possible extension to 2 or 3 years)

We are looking to hire one Postdoctoral Researcher to work on the EU project PANDORA: *Trustworthy Data Pipelines and AI Models for AIoT Applications*, funded by the Horizon Europe Research programme. The position is funded for an initial duration of one year, with a possibility for extension by up to one additional year. It is accessible to holders of Ph.D. degrees in computer science or a closely related field, with relevant experience and publication record.

The chosen candidate will become a member of the DiSSEM Team at Télécom SudParis, working under the guidance of Georgios Bouloukakis.

Background. As Internet of Things (IoT) and IoT-Edge-Cloud continuum technologies advance, physical environments are becoming increasingly equipped with sensors, fuelling the development of smart space ecosystems. Massive quantities of data produced by IoT devices revolutionize the way such ecosystems operate via the exploitation of AI models/services. This has led to the emergence of the so-called Artificial Intelligence of Things (AIoT) systems. In general, designing techniques to promote robustness, efficiency and continual operation of AIoT systems requires realistic and trustworthy data at scale.

The research scope of PANDORA aims at providing trustworthy AI models for continual, energy-efficient and robust operation of AIoT systems by relying on the emerging concepts of AI-as-a-Service (AIaaS) and Computing-as-a-Service (CaaS).

Area of responsibility. The selected candidate will conduct research for efficient and continual AIoT system operation. In particular:

1. AIaaS to enable exposure, dynamic model selection and lifecycle management.
2. Joint optimization and configuration of IoT-Edge-Cloud computing nodes for AIoT deployment.
3. Intent driven control to enable trustworthy closed loop operations with energy, accuracy and resource utilization intents.

Expected profiles. We are looking for candidates with research interests and expertise in all or a subset of middleware, distributed systems, AI systems, and IoT-Edge-Cloud applications.

Our selection will be primarily driven by the track record of candidates, their research interests, and their potential to make solid research contributions. Applicants must have a Ph.D. in Computer Science or a closely related field at the time they start the position.

Application details. To apply contact Georgios Bouloukakis, `georgios.bouloukakis AT telecom-sudparis.eu` by providing the following documents:

1. Curriculum vitae, including a comprehensive list of publications.
2. List of up to 3 reference persons and their e-mail addresses.
3. Link PhD thesis.

All documents must be sent in pdf format.
Potential candidates are welcome to contact us for a discussion prior to submitting an application.

About the Research team. Télécom SudParis is one of the top French engineering schools of higher education and research. It belongs to the Institut Mines-Télécom (IMT) Group and a founding member of the Institut polytechnique de Paris (IP Paris), ranked 38th by QS World University Rankings. The Distributed Systems, Software Engineering and Middleware (DiSSEM) group of Télécom SudParis conducts research and teaching activities to support the increasing complexity, heterogeneity and dynamism of physical infrastructures and distributed software architectures. The group's main objective is to provide novel middleware, abstractions and models to simplify the design and implementation of distributed applications following a software engineering approach.