

Software engineer

Full stack development and Artificial Intelligence

Institut Interdisciplinaire d'intelligence artificielle (3IA Côte d'Azur)

Job description

The job is part of a startup project involving researchers and a chair of the interdisciplinary institute of artificial intelligence 3IA Côte d'Azur, Nice, France.

The objective of the project is to develop a software suite for monitoring and diagnosing traffic lanes and infrastructures for smart cities and secure territories. The technology is based on the processing of data acquired in real time on pre-existing standard telecom optic fibers using a commercial DAS (Distributed Acoustic Sensing) interrogator. The algorithms under development in the team are based on artificial intelligence, and allow to monitor, in real time, simultaneously roadways and their geotechnic characteristics.

During his or her mission, the engineer will be able to seize the opportunity to partake in the startup's creation and develop the project on the longer term.

The position is open on a fixed-term contract for a period of 1 year, with the possibility of taking up the position immediately.

Contact: Prof. Cédric Richard (www.cedric-richard.fr; cedric.richard@unice.fr)

Main activities

The main responsibility of the engineer will be the development of a prototype of real time processing of remotely acquired DAS signals with artificial intelligence algorithms, and the real time visualization of the results through a web application.

These activities include:

- The proposal of a general software architecture that comprises the different software solutions that will be used, as well as the outline of an interface with the AI processing modules;
- The development of the front-end by improving the existing user interfaces and the integration of new visualization features;
- The development of the software interface allowing the execution of the AI processing modules in real time on a dedicated machine;
- The development of the software interface between the DAS interrogator and a time-series database including the optimization of the queries.

Profile

The candidate has a degree in software engineering or equivalent, and preferably 3 to 5 years of significant experience in the field.

Required skills

Technical skills:

- Mastery of development environments
- Programming: Python and its libraries including Keras, C
- Web development: HTML, CSS, JavaScript
- Linux system administration
- Utilization, management, and development of databases (time-series)
- Knowledge of machine learning and deep learning techniques
- Scientific skills (mathematics/physics) appreciated

Abilities:

- Proactivity, autonomy, rigor, organization
- Ability to work in a team

Location of the job

Prof. Cédric Richard's group
Université Côte d'Azur - Parc Valrose
Laboratoire J.-L. Lagrange
06108 Nice CEDEX 2

Duration

Full time for 12 months

Additional information:

Applications, including a resume and cover letter, should be sent to cedric.richard@unice.fr with a copy to recrutement@univ-cotedazur.fr by October 15, 2022.