Two year research Engineer position in green AI applied to tutoring systems in primary schools
Computer vision and Optical Character recognition

Education is becoming more and more digital and as a consequence, more and more education data is available. This open new perspectives to build models to prevent didactic holes and weaknesses as well as to compare different learning methods. In this context, two positions are opened at the university of Pau in a joint R&D project with the Prof En Poche company.

The Prof En Poche company is currently installing embedded agents in dozens of French primary schools. The first goal is to help children education and day by day learning. Secondly, this is a unique opportunity to gather data on children education at a large scale. However, this setting rises the issue of building a children computer interface in a noisy environment such as a classroom. The Prof En Poche agent uses technologies such as Optical Character Recognition (OCR) as the children are writing on the tablet. Although opensource solutions are available, they have to be adapted to fit this specific context in terms of robustness to noise and the particular domain of the data through transfer learning. Most importantly, the project participates to a research effort toward the reduction of IA carbon footprint, which is the main research topic of our research group. As a consequence, a focus will be placed on light deep learning models for instance, through pruning, quantization or energy aware neural architecture search. To sum up, the challenge of the project is to build an embedded OCR system, while optimizing a compromise between accuracy and carbon footprint.

The fundings come from a specific national government plan and for this reason, the applicants MUST have obtained a French diploma in 2021. The successfull applicants will join the university of Pau (UPPA) within the IA&Environmment group recently created by Sébastien Loustau. 4 days a week are used for the project and among them, 3 days will be spent at the lab. The 5th day is dedicated to company specific tasks.

Prerequisites and required experiences:
- Data scientist French diploma in 2021 (Master or Phd)
- Computer vision and Optical Character Recognition.
- Programming experience and machine learning modeling.
- Experience in light deep learning model (binary, pruning quantization) will be a plus.
- French speaking skills spoken and written are highly recommended

Localisation: Pau, France
Pau is located in a scenic region in the south west of France, surrounded by the Pyrenees mountains and the Atlantic Ocean. It offers high quality of life, exciting recreational activities, including hiking, climbing, skiing and surfing as well as varied cultural activities. It is within close proximity to Spain, Toulouse and Bordeaux.

Limite date : September 2021
Contact : paul.gay@univ-pau.fr, sebastien.loustau@univ-pau.fr

To apply, send your resume, a covering letter, the contact of two references to support your application, as well as relevant grades.