



Research Engineer Position in Automatic Speech Recognition for Computer-Assisted Language Learning (CALL) applications

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Context

ALAIA (AI-assisted language learning) is a **joint laboratory**, supported by the LabCom program of the French National Research Agency, between the SME **Archean Technologies** (Montauban, France) and **IRIT** (Toulouse Institute of Computer Science Research, UMR 5505 CNRS-INP-UT3-UT1-UT2J, Toulouse, France).

ALAIA joins the complementary skills of the academic and industrial partners for the development of **foreign-language learning applications**. For this purpose, ALAIA adopts a **multidisciplinary perspective combining foreign language pedagogy, linguistics, and data science**.

The first step of the ALAIA research program focuses on the automatic assessment of the **phonetic-phonological skills** of foreign-language learners. Within this context, the ALAIA team aims at recruiting a **research engineer in computer science**, ideally with high skills or with some experience in ASR such as building acoustic and language models with standard tools. People with knowledge in NLP are also welcome to apply.

Working conditions

- Location: IRIT - 118, route de Narbonne 31062 TOULOUSE, with punctual meetings in Montauban (82000)
- Duration: from 12 to 18 months
- Salary: according to background and experience

Job description

The job consists in designing methods for the automatic detection and characterization of pronunciation errors, as provided by human experts (e.g., language teachers). To this end, at first the candidate will use methods and tools available in the team, and then adapt the existing tools and / or propose new methods, relying on:

- Acoustic modeling and adaptation (speaker, first language...)
- Language modeling
- Machine learning (detection and classification of mispronunciations, measures of speech intelligibility and comprehensibility)

Expected skills

- Software development and Python programming
- Signal/speech processing
- Machine learning (basic knowledge of "deep learning" would be a plus)
- Complementary skills: experience with ASR systems (e.g. Julius, Kaldi, HTK)



Application form

Applications should include:

- a detailed CV
- one or two recommendation letters or contact information
- a one-page cover letter
- a one-page summary of the PhD thesis

Applications should be sent to isabelle.ferrane@irit.fr

The position is open until it is filled, with deadline on December 1st, 2019.