AGHILAS SINI

(+33) 03 · 83 · 59 · 20 · 97 ◇ aghilas.sini@inria.fr
615 Rue du Jardin Botanique ◇ Villers les Nancy , 54600 France (professionnel)
17 Rue du Général Frère ◇ Vandoeuvre les Nancy, 54500 France (Privete)

Research Interest

Speech and Image Processing, Data Science, Machine learning.

Education

Academic background

2014 **Master 2 - Artificial Intelligence, Pattern Recognition and Robotics**
University Paul SABATIER- TOULOUSE. France

2013 **Master 1 - Real Time Systems Engineering**
University Paul SABATIER- TOULOUSE. France

2011 **B.Sc - Control System and Automation**
University Mouloud MAMMERI- TIZI OUZOU. Algeria

WorkShop attended

5-6 Nov 2015 **Workshop on "Feedback in Pronunciation Training"**
Hofgut Imsbach, Northern Saarland, Germany

Professional Experience

Engineer

Jan 2016 – Mar 2016 **Lecturer in Web Programming**
IUT Charlemagne,Lorraine University Nancy.
- JavaScript, Ajax, JQuery, second years post baccalaureat (Bac+2)

Jan 2016 **IFCASL Project Individualized Feedback for Computer-Assisted Spoken Language Learning**
LORIA Laboratory Nancy.
- Modification and resythesis of learner audio samples using teacher audio samples based on Pitch Synchronous Overlap And Add Algorithm
- Feedback to correct devoicing of final consonants in French spoken by German learner.
- improving speech texte alignemt for language learning using deep neural network, training network with theano and decoding with DN4J (IFCASL Corpus).
- speech features extraction for pitch detection using deep neural network.

Nov 2014 – Jan 2016 **ORTOLANG Project Open Resources and TOols for LANGuage**
LORIA Laboratory Nancy.
- Developement of syntactic-semantic analyser for spoken documents in French language - open source tool J-Safran released by LORIA. Includes dependency parser for oral speech and inclusion of inference of partial semantic role labels on top of syntactic parsing.
- Tool for semi-automatic alignement of speech and textual corpus - open source tool JTRANS relesead by LORIA. Working on correction of speech and text alignement around silence segments.
- Interactive tool for speech signal processing and phonetics - open source tool JSnoori released by LORIA. Developement of module for pitch estimation.

Intership

Mar 2014 – Aug 2014 **Mapping of a sound environment for a mobile robot**
LORIA Laboratory Nancy.
- Control of a mobile robot movements to localize a sound source as quickly as possible. The belief about the source position is represented by a discrete grid and a dynamic programming algorithm was introduced to find the optimal robot motion minimizing the entropy of the grid.

Publications:

E. Vincent, A. Sini and F. Charpillet, "Audio source localization by optimal control of a mobile robot," Acoustics, Speech and Signal Processing (ICASSP), 2015 IEEE International Conference on, South Brisbane, QLD, 2015, pp. 5630-5634.

Activities & Independents Courses

Other Activities

- Data collection for IFCASL Project
- Member of Deep Learning Group at LORIA
- volunteer for MRI Data Collections
- Hosted the booth for demonstration of tools in "Village des Sciences" at LORIA

Online Certificate Courses

Oct 2015	**Digital Signal Processing**
Dec 2015	*École polytechnique fédérale de Lausanne* ***taught by Prof. Paolo Prandoni & Martin Vetterli***
Jan 2016	**Data Science Specialisation**
present	*Johns-Hopkins University* ***by Jeff Leek, PhD, Roger D. Peng, PhD & Brian Caffo, PhD***
Dec 2015	**Machine Learning**
present	*Stanford University* ***by Andrew Ng***

Computer Skills

Scripting	Shell script, Windows Batch script, Jython, Python
Programming	C, C++, Java
Scientific	Matlab/Octave, Theano, R
Web	HTML, CSS, PHP, JavaScript, Ajax, JQuery
Databases	MySQL, PostgreSQL.
Protocols & APIs	XML, JSON, SOAP, REST
Tools	Git, Ant, Maven, Vim.

Language

Kabyle	native
French	fluent
Arabic	fluent
English	intermediate
German	beginner

Referees:

Denis Jouvet	Research Director, INRIA Multispeech denis.jouvet@inria.fr
Emmanuel Vincent	Senior Researcher, INRIA Multispeech emmanuel.vincent@inria.fr
François Charpillet	Research Director, INRIA Larsen francois.charpillet@inria.fr
Yves Laprie	Research Director, CNRS Multispeech yves.laprie@loria.fr