AGHILAS SINI

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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**	
	Université Paul SABATIER- TOULOUSE. France	
2013	**Master 1 - Real Time Systems Engineering**	
	Université Paul SABATIER- TOULOUSE. France	
2011	**B.Sc - Control System and Automation**	
	Université 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, Université de Lorraine, Nancy
- JavaScript, Ajax, JQuery. For second year post baccalaureat students

Jan 2016
IFCASL Project (Individualized Feedback for Computer-Assisted Spoken Language Learning)
LORIA Laboratory Nancy.
- Modification and re-synthesis 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 learners.
- improving speech text alignment for language learning using deep neural network, training network with theano and decoding with DL4J (IFCASL Corpus).
- extraction of speech features for pitch detection using deep neural network.

Nov 2014
Jan 2016
ORTOLANG Project Open Resources and TOols for LANGuage
LORIA Laboratory Nancy.
- Development 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 alignment of speech and textual corpus - open source tool JTRANS relesead by LORIA. Working on correction of speech text alignment around silence segments.
- Interactive tool for speech signal processing and phonetics - open source tool JSnoori released by LORIA. Development of module for pitch estimation.

Internship

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 & Independent Courses

Other Activities

- Data collection for IFCASL Project
- Member of Deep Learning Discussion 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, Roger D. Peng & Brian Caffo**
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
Yves Laprie	Research Director, CNRS Multispeech
	yves.laprie@loria.fr