AGHILAS SINI

615 Rue du Jardin Botanique ⋄ Villers les Nancy , 54600 France

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Research Interest

Speech and Language Processing, 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 and Summer School attended

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

Jul **Speech Synthesis :Advancements in Modern Speech Synthesis Engines**
2016 *University of Crete, Heraklion, Crete, Greece*

Professional Experience

As a research engineer

Jan 2016 **IFCASL Project (Individualized Feedback for Computer-Assisted Spoken Language**
present **Learning)**
LORIA-INRIA Laboratory Nancy.
- Automatic pronunciation diagnosis and error detection for Germans learning french
- 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 TensorFlow and decoding with DL4J (IFCASL Corpus)
- Extraction of speech features for pitch detection using deep neural network

Jan 2016 **Lecturer in Web Programming**
Mar 2016 *IUT Charlemagne, Université de Lorraine, Nancy*
- JavaScript, Ajax, JQuery. For second year post baccalaureat students

Nov 2014 **ORTOLANG Project Open Resources and TOols for LANGuage**
Jan 2016 *LORIA-INRIA Laboratory Nancy.*
- Development of syntactic-semantic analyser tool called J-Safran for spoken documents in French language
- Contributing to development of JTRANS tool for semi-automatic alignment of speech and textual corpus
- Contributing to development of JSnoori an Interactive tool for speech signal processing and phonetics

Internship (Master Thesis)

Mar 2014	**Mapping of a sound environment for a mobile robot**
Aug 2014	*LORIA-INRIA 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

(1) 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.

(2) S. Ghosh, A. Sini, Y. Laprie and C. Fauth, 2016. L1-L2 interference: the case of final devoicing of French voiced fricatives in final position by German learners. To appear in Proceedings of Interspeech 2016, San Francisco.

Activities & Independent Courses

Other Activities

- Data collection for IFCASL Project
- Member of Deep Learning Discussion Group at LORIA-INRIA
- 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**
May 2016	*Johns-Hopkins University* **by Jeff Leek, Roger D. Peng & Brian Caffo**

Computer Skills

Programming	C, C++, Java, Shell script, Jython, Python
Scientific tools	Matlab/Octave, TensorFlow, R
Web	HTML, CSS, JavaScript, Ajax, JQuery, REST
Data structure	XML, JSON

Communication Skills

French	Fluent
English	Fluent

References

Denis Jouvet	Research Director, INRIA Multispeech
	denis.jouvet@inria.fr
Yves Laprie	Research Director, CNRS Multispeech
	yves.laprie@loria.fr