AGHILAS SINI

Research And Development Engineer

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

Education

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

Professional Experience

Engineer

Jan 2016 – Mar 2016 **Lecturer in Web Programming**
IUT Charlemagne, Université de Lorraine, 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 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.

Computer Skills

Programming	Shell script, Windows Batch script, Java, Jython, Python, C, C++
Scientific	Matlab/Octave, TensorFlow, Theano, R, ROS
Web	HTML, CSS, JavaScript, Ajax, JQuery
Technologies	XML, JSON, REST, Git, Ant, Maven, Vim, jenkins

Language

Kabyle (native) **French** (fluent) **Arabic** (fluent) **English** (intermediate) **German** (beginner)