Ayoub Maatallaoui, BSc, MA, MSc - Scientific Analyst Developer

Personal Information

- Personal Address : 8 Rue Vauban, 29200 Brest, France
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- E-mail : ayoub.maat@gmail.com

- Date of Birth : April 11th, 1987
- Nationality : Tunisian
- Marital Status : Single
- Driving Licence : Category B

Academic Experience

Grenoble Institute of Technology, Grenoble, France

Cognitive Sciences Master's Degree — September 2011 - June 2012

Stendhal University, Grenoble, France

Natural Language Processing Master's Degree, Language Sciences — September 2010 - June 2011

Faculty of Science of Monastir, Tunisia

Information Technology Bachelor's Degree — September 2008 - June 2010

Mathematics and Information Technology Higher Education Diploma — September 2006 - June 2008

Work Experience and Internships

European Center for Virtual Reality, Brest - France

R&D Engineer

- Period: from September 2012 to June 2014.
- Project: InGredible
- Environment: C++, Java, Google Protobuf, Machine Learning, Virtual Agents, Body tracking techniques (Moven, ART-Human, Microsoft Kinect), experimentations.
- Abstract: My task in the project consisted in developing a cognitive architecture able to reproduce the dynamics of the coupling between two humans during a bodily interaction. Various phenomena such as synchrony, imitation and subtle behavioural variations that emerge in human interactions were taken into account. The final goal was the real-time animation of a virtual character during the interaction with a user.

GIPSA-Lab, Grenoble - France

Master's Internship

- Period: from February to June 2012.

- Topic: Watching a movie together: investigation of cospectra in simultaneous electroencephalographic (EEG) data recording.
- Project: Brain Coupling
- Advisor: Marco Congedo
- Environment: Matlab, OpenViBE, g-Recorder, SoftEye and Linux (Ubuntu).
- Abstract: This work aims to investigate a spontaneous coupling between two/four brains by means of multivariate analysis of the dependence structure of two/four electroencephalographic tracings in time and under different experimental conditions.

Grenoble Computer Science Laboratory, Grenoble - France

Master's Internship

- Period: from January to June 2011.
- Topic: Everyday sounds classification in a Smart-Home environment using probabilistic methods.
- Project: Sweet-Home
- Advisors: Michel Vacher and François Portet.
- Environment: C++, Weka, Matlab, Wavedit,Praat, R, Octave and Linux (Ubuntu).
- Abstract: This work aims to study a module dealing with the sounds of everyday life. It deals mainly with the segmentation of sound events between speech and sound, and also with the classification of everyday sounds once we decide that it's not a speech signal. The approach that we proposed here is based on multi-scale parameters (F_0, waveform, MFCCs...) for better description of the sound signal and uses a hierarchical classifier to guarantee more genericity.

Monastir Faculty of Science, Monastir - Tunisia

End of Studies Project

- Period: from February to June 2010.
- Topic: Time series similarity measure: the case of the electroencephalogram (EEG).
- Advisor: Nizar Kerkeni
- Programming environment: Java and Linux (Debian).
- Abstract: The analysis and study of the physiological signals are areas of interest for researchers from different disciplines such as Information Technology and medicine. My work consists of developing modules, based on Dynamic Time Warping and Longest Common Subsequence algorithms, for measuring similarity between two signal portions (time series).

Research Publications

Elisabetta Bevacqua, Igor Stanković, Ayoub Maatallaoui, Alexis Nédélec and Pierre De Loor: Effects of coupling in human-virtual agent body interaction. Fourteenth International Conference on Intelligent Virtual Agents, vol. 8637, pp. 54-63. Springer, Boston (August 2014).

Pierre De Loor, Elisabetta Bevacqua, Igor Stanković, Ayoub Maatallaoui, Alexis Nédélec and Cédric Buche: Utilisation de la notion de couplage pour la modélisation d'agents virtuels interactifs socialement présents. Actes de la deuxième conférence Intercompréhension de l'intraspécifique à l'interspécifique. Oxford University Press, Guidel, France (October 2013) to appear.

Mohamed Belgacem, Ayoub Maatallaoui and Mounir Zrigui: Arabic language learning assistance based on automatic speech recognition system. International Conference on Image Processing, Computer Vision, and Pattern Recognition. IPCV'2011. Las Vegas, (July 2011).

Technical Skills Programming: C, C++, Java, Matlab, HTML5, CSS, PHP, SQL, LaTeX. and others

Programming IDEs: Eclipse, NetBeans, Brackets, Qt Creator, Visual Studio.

Scientific: Machine learning, Virtual Agents, EEG signal recording and analysis, Experimental set-up. and others

Office automation packages: Libre Office and Ms Office.

Operating Systems: GNU/Linux (Debian/Ubuntu/Fedora), Microsoft Windows (XP/Vista/7/8), Mac OS.

Other: Computer maintenance, DBMS, Free Software, Multimedia. and others

Honours Invited speaker at OSE'2014 infomation days at Stendhal University, Grenoble 2014.

Elected member of the Lab-STICC laboratory board, March 2013 to June 2014.

Extra Activities Member of the WWF French team, France since November 2012.

Member of the Organizing Committee of the 3rd Junior's World Handball Championship, Tunisia 2009.

Handball player in the Sport Association of Hammamet, Tunisia (2002 - 2008).

Karate player in Nabeul Karate Team, Tunisia (1997 - 2002).

Hobbies Reading, Guitar, Harmonica, Origami, Handball, Kayaking.

Spoken languages

- Arabic : Mother Tongue
- French : Fluent
- English : Fluent
- German : Academic