Marc Siquier Penyafort

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Audiovisual Systems Engineer (ETSETB, Telecom-BCN, UPC). MSc on Sound and Music Computing (MTG-UPF). Working as developer at BSC-CNS. Passionate about technology and music.

Work Experience

BSC-CNS Barcelona Supercomputing Center **Barcelona**
Developer *April 2015 – Present*

Working at the Computer Science - Storage Systems department, on the European IOStack project. The main objective is to create IOStack: a Software-defined Storage toolkit for Big Data on top of the OpenStack platform. IOStack will enable efficient execution of virtualized analytics applications over virtualized storage resources thanks to flexible, automated, and low cost data management models based on software-defined storage (SDS).

AMES - Sintered Metallic Components **Barcelona**
Application programmer *November 2014 – February 2015*

Program in C++ of an application designed for classification of metal sintered pieces as a quality system. (Acquisition of vibration signals of pieces, filtering, spectrum calculation, spectral peaks detection, classification algorithm based on neural networks).

University Education

Universitat Pompeu Fabra - UPF **Barcelona**
MSc on Sound and Music Computing *2016 – 2017*

This program trains the students on the technologies for the analysis, description, synthesis, transformation and production of sound and music, and on the technologies and processes that support sound and music creation.

- **Master's Thesis:** *'Computational modeling of expressive music performance in hexaphonic guitar'*

  In this master thesis, supervised by Sergio Giraldo, we developed a machine learning approach to automatically generate expressive music performances from non-expressive music scores of polyphonic guitar, treating guitar as an hexaphonic instrument.

Universitat Politècnica de Catalunya - ETSETB TelecomBCN **Barcelona**
BSc on Audiovisual Systems Engineering *2010 – 2015*

Fundamentals and applications of audio, video and multimedia systems and acquisition techniques for the analysis and synthesis of electrical and electronic circuits and digital and analogue communications. Specialization in acoustics and sound systems, digital signal processing, communication systems, electronic equipment and devices and multimedia techniques.

- **Degree's final project:** *'Query by Singing/Humming (Android App)'*

  `http://upcommons.upc.edu/pfc/handle/2099.1/25415`

Education

Colegio San Cayetano — **Palma de Mallorca**
Infantil, Primaria, ESO and Bachillerato studies — *1996 – 2010*

Conservatori Professional de Música i Dansa de Mallorca — **Palma de Mallorca**
Elementary Grade of violin — *2000 – 2006*

Conservatori Professional de Música i Dansa de Mallorca — **Palma de Mallorca**
Middle Grade of violin — *2006 – 2010*

Publications

- R.Nou, A.Miranda, M.Siquier, T.Cortes. Improving OpenStack Swift interaction with the I/O Stack to enable Software Defined Storage. *IEEE SC2-2017. The 7th IEEE International Symposium on Cloud and Service Computing,* Kanazawa, Japan, November 2017.
- M.Siquier, S.Giraldo, R.Ramírez. Computational modelling of expressive music performance in hexaphonic guitar. *Proc. of the 10th International Workshop of Machine learning and music,* Barcelona, Spain, October 2017.

Technical and Personal skills

Languages: Catalan (mother tongue), Spanish (mother tongue), English (Certificate in Advance English, June 2015).
Driving License: B
Programming Languages: Proficient in: C, C++, Python, Matlab, Java, TeX
Also medium ability with: JavaScript, XML, HTML, SQL, R, Android SDK, PureData, Max.
Technical skills: Digital signal processing (sound and music), Machine Learning, Pattern Recognition, Acoustics, Bio-metrics, Modeling, Unix systems, Music recording, Music production.

On-line Courses

Audio Coding: Beyond MP3 — **edX**
Universitat Politècnica de València — *September 2017*

Machine Learning for musicians and artists — **Kadenze**
Goldsmiths University of London — *June 2017*

Audio Signal Processing For Music Applications — **Coursera**
Universitat Pompeu Fabra & Standford University — *September 2016*

Machine Learning — **Coursera**
Stanford University — *June 2016*