

# Mohamed Sordo

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## Summary

- Scientist, music technologist, developer, data miner.
- PhD in Information and Communication Technologies from Pompeu Fabra University (2012).
- Interested in information retrieval, natural language processing, data mining, machine learning and complex networks.
- Working on knowledge extraction, recommender systems and automatic tagging of music.

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## Experience

- Jan. 2015 – present — **Post-doc associate**, *University of Miami*, Coral Gables, FL (USA).
- Extracting knowledge from unstructured data, for music recommendation and discovery.
  - Analyzing and modeling the evolution of research communities.
- Oct. 2014 – Dec. 2014 — **Freelance data scientist**, *GroopLab Srl*, Berlin (Germany).
- Designed and developed a recommender system for GroopApp, a social mobile app that provides recommendations of musical events.
- Mar. 2012 – Dec. 2014 — **Post-doc researcher**, *Universitat Pompeu Fabra*, Barcelona (Spain).
- Developed methods to extract semantic information from unstructured data.
  - Lead the team in charge of the Arab-Andalusian music, as part of the EU funded project CompMusic.
  - Tutorial on music automatic tagging in ISMIR 2013, a key conference in the field of Music Information Retrieval.
  - Co-organized the Music Hack Day, Barcelona (one of the most successful and long-lived hackathons around music technology) from 2010 to 2014.
- Sept. 2012 – July. 2014 — **Assistant professor**, *Universitat Pompeu Fabra*, Barcelona (Spain).
- Taught advanced topics on audio and music processing to MSc students in Sound and Music Computing.
  - Taught programming and graph theory to students of the Bachelor's degree in Computer Science.
  - Supervised the final degree project of two Computer Science students.
- Apr. 2010 – Jun. 2010 — **Visiting researcher**, *INESC Porto*, Porto (Portugal).
- Designed and developed a method for uncovering semantic facets of music tags.
- Apr. 2007 – Sept. 2011 — **Teacher assistant**, *Universitat Pompeu Fabra*, Barcelona (Spain).
- Taught graph theory, object oriented programming and C programming to students of the Bachelor's degree in Computer Science.
  - Supervised the final degree project of a Computer Science student.
- Dec. 2005 – Jun. 2006 — **Engineering internship**, *InQA.labs*, Barcelona (Spain).
- As part of a development team, I worked on the second version of a proprietary software tool that performed system testing of software from external companies.

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## Education

- Oct. 2007 – Feb. 2012 — **Doctor of Philosophy (PhD), Information and Communication Technologies**, *Universitat Pompeu Fabra*, Barcelona (Spain), *Cum Laude*.  
PhD dissertation entitled "Semantic Annotation of Music Collections: a Computational Approach". The dissertation focuses on automatic tagging of music collections, using audio content information plus semantic classification of tags.
- Oct. 2006 – Sep. 2007 — **Master's degree, Information and Communication Technologies**, *Universitat Pompeu Fabra*, Barcelona (Spain).

Sep. 2001 – **Engineer's degree, Computer Science**, *Universitat Pompeu Fabra*,  
Jun. 2006 Barcelona (Spain).

### Online Courses

Sept. 2014 – **Mining Massive Datasets**, *Coursera/Stanford University*, Grade achieved:  
Dec. 2014 *97.2% with distinction*.

Sept. 2014 – **Machine Learning**, *Coursera/Stanford University*, Grade achieved: 100%.  
Dec. 2014

### CS skills

Programming In order of proficiency: Python, Java, C, C++, Matlab.

Databases MySQL, Postgre SQL.

Search Lucene, pyLucene.

Tools/Libraries NLP (Stanford NLP, NLTK, gensim, Mallet), Machine Learning (Scikit-learn, Mahout, Weka, LibSVM), Information Retrieval (Lucene, Scrapy), Complex Networks (networkx, graph-tool, Neo4j), Audio Signal Processing (Essentia).

Projects <http://msordo.weebly.com/projects.html>

Code <https://github.com/neomoha>

Hacks <https://www.hackerleague.org/users/neomoha>

### Languages

**English** (fluent), **Spanish** (fluent), **French** (upper-intermediate), **Arabic** (native), **Catalan** (fluent), **Portuguese** (elementary).

### Publications

#### Selected publications

S. Oramas, M. Sordo, and L. Espinosa. A Rule-Based Approach to Extracting Relations from Music Tidbits. *2nd Workshop on Knowledge Extraction from Text, WWW 2015*, Florence, Italy, 2015.

M. Schedl, M. Sordo, N. Koenigstein, and U. Weinsberg. Mining User-generated Data for Music Information Retrieval. *Mining User Generated Content*. ISBN: 9781466557406. 2014.

M. Sordo, F. Gouyon, L. Sarmiento, Ò. Celma, and Xavier Serra. Inferring semantic facets of a music folksonomy with wikipedia. *Journal of New Music Research*, 42:346-363, 12/2013 2013.

C. Laurier, M. Sordo, J. Serrà, and P. Herrera. Music mood representations from social tags. In *International Society for Music Information Retrieval (ISMIR) Conference*, pages 381-386, Kobe, Japan, 2009.

M. Sordo, Ò. Celma, M. Blech, and E. Guaus. The quest for musical genres: Do the experts and the wisdom of crowds agree? In *9th International Conference on Music Information Retrieval*, Philadelphia, USA, 2008.

M. Sordo, C. Laurier, and Ò. Celma. Annotating music collections: How content-based similarity helps to propagate labels. In *8th International Conference on Music Information Retrieval*, Vienna, Austria, 2007.

A full list of my publications can be found here: <http://mtg.upf.edu/biblio/author/153>