

# Olga Slizovskaia

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## Education

- 2016–ongoing **PhD Candidate, Computer Science**, *Universitat Pompeu Fabra*, Barcelona, Spain.  
Supervisor: Prof. Emilia Gomez, Prof. Gloria Haro
- 2008–2013 **Specialist degree, Applied Mathematics and Computer Science**, *Lomonosov Moscow State University*, Moscow, Russia, GPA: 4.5/5.0.  
Supervisor: Dr. Dmitry Kozlov  
Thesis: Content-based and context-based music mood classification

## Experience

### Vocational

- 01/2016–present **PhD Researcher**, *Universitat Pompeu Fabra, Music Technology Group & Image Processing Group*, Barcelona, Spain.  
This research project is focused on audio-visual approaches in music information retrieval.  
Keywords: convolutional neural networks, music information retrieval, musical instrument detection, video analysis
- 05/2015–11/2015 **Data analyst/Software Engineer**, *Data-Centric Alliance*, Moscow, Russia.  
Responsibilities:
  - developing machine learning models for online advertising (includes data preprocessing and parameters optimization);
  - writing Groovy scripts for internal data management platform Facetz;
  - statistical hypothesis testing.Keywords: Python, Weka, scikit-learn, Hbase, Hive, HDFS, Groovy, MongoDB
- 12/2013–04/2015 **Music Ingestion Engineer**, *Zvooq LLC*, Moscow, Russia.  
I was working on music ingestion infrastructure of Russian music streaming service Zvooq.  
Accomplishments:
  - renovate music ingestion infrastructure with a group of engineers;
  - set up weekly reports on content processing;
  - design and development a prototype of a system to compute a legal restrictions for the music streaming process.Keywords: Python, PostgreSQL, R, bash, RabbitMQ, FreeBSD, Hbase
- 09/2012–12/2013 **QA/Test Engineer**, *Mentor Graphics Development Services Ltd*, Moscow, Russia.  
Functional and regression testing, test cases preparation, bug tracking and reporting, lead local team of 3 engineers.

## Teaching Experience

- 2017 **Teaching Assistant, Image Analysis and Interpretation (code 21632)**, *Universitat Pompeu Fabra*, Barcelona, Spain.  
The course covers fundamental and advanced techniques in computer vision such as image representations, point and feature detection and matching, clustering and segmentation, foreground-background decomposition, face detection, object and scene recognition.
- 2016 – 2017 **Teaching Assistant, Sound Creation Lab (code 21629)**, *Universitat Pompeu Fabra*, Barcelona, Spain.  
The main focus of the course is on sound recording, mixing, generation and analysis. Students also get to know about audio features in time and spectral domains. For the final project students aim to create a complete musical piece with a real-time interaction.
- 09/2012–05/2013 **Teaching Assistant, Informatics**, *179 School of Moscow Institute Of Open Education*, Moscow, Russia.  
Introduction to algorithms and programming languages for secondary school. Introduction to LegoNXT platform, PID-controllers. The final project of the course is based on LegoNXT.

## Organization Experience & Review Activities

- 2016, 2017 International Society for Music Information Retrieval Conference, *Reviewer*
- 2016, 2017 DTIC Doctoral Student Workshop, UPF, *Organizing committee member*
- 09/2016 Women in Machine Learning, *Reviewer, Volunteer*
- 08/2015 PyLadies Moscow Meetup, *Organizer*

## Talks & Poster presentations

- 09/2017 Correspondence between audio and visual deep models for musical instrument detection in video recordings, *Systematic Approached to Deep Learning Methods for Audio*, Vienna, Austria
- 05/2017 Convolutional neural networks for audio processing: starting pack, *PyData Conference, Tutorial*, Barcelona
- 03/2017 Introduction to Deep Neural Networks, *for Sound and Music Computing master students*, UPF, Barcelona
- 12/2016 Automatic musical instrument recognition in audio-visual recordings by combining image and audio classification strategies, *11th Women in Machine Learning Workshop, co-located with NIPS*, Barcelona
- 12/2016 Musical instrument recognition in user-generated videos using a multimodal convolutional neural network architecture, *Workshop on music knowledge extraction using machine learning, co-located with NIPS*, UPF
- 10/2016 Optimization for Training Deep Models, *Deep Learning Study Group seminar*, UPF
- 04/2016 Towards the self-annotating multimedia, *Research in 4 minutes competition*, UPF

## Miscellaneous

- 09/2016 LifeSoundtrack (Banda Sonora Vital). Music recommendation system for people with dementia, *Developer*

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## Honors

- 03/2016 Maria de Maetzu Unit of Excellence Fellowship, UPF

## Skills

Programming Languages	Python, R, PL/pgSQL, C/C++, bash, JavaScript	Research Libs	NumPy, Scikit-learn, OpenCV, Theano, TensorFlow, Keras, XG-Boost, nltk
Programming Tools	git, SVN, Docker, Vagrant, Jenkins, Apache	Professional Libs	SQLAlchemy, Alembic, RabbitMQ (pika, kombu)
Databases	PostgreSQL, MySQL, MongoDB, Hive, Hbase	Additional Skills	Latex, UML, Intel Rational software, Mentor Graphics Xpedition
Languages	Russian (native), English (B2.2 CEFR), Spanish (B1 CEFR)		

## Publications

- [1] Eduardo Fonseca, Rong Gong, Dmitry Bogdanov, Olga Slizovskaia, Emilia Gomez, and Xavier Serra. Acoustic scene classification by ensembling gradient boosting machine and convolutional neural networks. In *Workshop on Detection and Classification of Acoustic Scenes and Events*, Munich, Germany, 2017.
- [2] Olga Slizovskaya (Kalistratova). Information retrieval methods for music mood classification. In *The XX International young scientists conference "Lomonosov"*, Moscow, Russia, 2013.
- [3] Jordi Pons, Olga Slizovskaia, Rong Gong, Emilia Gómez, and Xavier Serra. Timbre analysis of music audio signals with convolutional neural networks. In *25th European Signal Processing Conference (EUSIPCO)*, Kos island, Greece, 2017. IEEE.
- [4] Olga Slizovskaia, Emilia Gómez, and Gloria Haro. Automatic musical instrument recognition in audiovisual recordings by combining image and audio classification strategies. In *13th Sound and Music Computing Conference (SMC 2016)*, Hamburg, Germany, 2016.
- [5] Olga Slizovskaia, Emilia Gómez, and Gloria Haro. Correspondence between audio and visual deep models for musical instrument detection in video recordings. In *18th International Society for Music Information Retrieval Conference*, Suzhou, China, 2017.
- [6] Olga Slizovskaia, Emilia Gómez, and Gloria Haro. Musical instrument recognition in user-generated videos using a multimodal convolutional neural network architecture. In *ACM International Conference on Multimedia Retrieval*, Bucharest, Romania, 2017. ACM Digital Library.