

Iryna Korshunova

Location	Ghent, Belgium	Website	irakorshunova.github.io/
Email	irene.korshunova@gmail.com	Github	github.com/IraKorshunova
		Kaggle	kaggle.com/golondrina

Education

2015-	PhD student in Machine Learning - Reservoir Lab, Ghent University, Belgium
2013-2015	MSc in Statistical Data Analysis - Ghent University, Belgium <i>Magna cum laude</i> Thesis: "Epileptic seizure prediction using deep learning" [pdf]
2012-2015	MSc in Applied Mathematics - National Technical University of Ukraine "Kiev Polytechnic Institute" <i>Diploma with honours</i>
2008-2012	BSc in Applied Mathematics - National Technical University of Ukraine "Kiev Polytechnic Institute" <i>Diploma with honours</i> Thesis: 'Classification of functional data using free knots splines'

Extra Courses

July, 2015	Machine Learning Summer School Max Planck Institute for Intelligent Systems, Tübingen, Germany (received a travel stipend)
August, 2015	Deep Learning Summer School Université de Montréal, Montreal, Canada

Research Assistantships

Summer, 2017	Twitter London, UK <i>Research Intern</i>
Summer, 2016	Twitter / Magic Pony Technology, London, UK <i>Research Intern</i> Supervisors: Lucas Theis and Ferenc Huszár Developed a real-time face swapping method based on neural style transfer
Summer, 2013	Grammarly Inc., Kiev, Ukraine <i>Research Engineer Intern</i> Created a multipurpose Wikipedia-based corpus; trained a topic model and implemented an algorithm for its evaluation, integrated this model into contextual spell checker; compared the performance of several named-entity recognizers.

Honours and Awards

2017	Data Science Bowl 2017 (Kaggle) <i>9th place, \$25K prize, team Deep Breath</i> Lung cancer prediction from chest CT scans [blog post]
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- 2016** Second Annual Data Science Bowl (Kaggle)
2th place, \$50K prize, team kunsthart
 Cardiac volumes estimation based on 4D MRI-data of a heart [blog post]
- 2015** National Data Science Bowl (Kaggle)
1st place, \$100K prize, team Deep Sea
 Classification of plankton images [blog post]
- 2014** American Epilepsy Society Seizure Prediction Challenge (Kaggle)
10th place, top 2%
 Epileptic seizure prediction based on iEEG signals [code, blog post, poster]

Publications

Iryna Korshunova, Pieter-Jan Kindermans, Jonas Degraeve, Thibault Verhoeven, Benjamin Brinkmann, Joni Dambre. Towards improved design and evaluation of epileptic seizure predictors. *IEEE Transactions on Biomedical Engineering*, 2017

Iryna Korshunova, Wenzhe Shi, Joni Dambre, Lucas Theis. Fast Face-swap Using Convolutional Neural Networks. *arXiv preprint arXiv:1611.09577*

Benjamin H. Brinkmann, Joost Wagenaar, **Iryna Korshunova** et al. Crowdsourcing Reproducible Seizure Forecasting in Human and Canine Epilepsy. *Brain Jun 2016, 139 (6) 1713-1722*;
 DOI: <http://dx.doi.org/10.1093/brain/aww045>

Bob L. Sturm, João F. Santos, Oded Ben-Tal, **Iryna Korshunova**. Music Transcription Modelling and Composition Using Deep Learning. *1st Conference on Computer Simulation of Musical Creativity, June 2016* [arxiv, code]

Bob L. Sturm, João F. Santos, and **Iryna Korshunova**. Folk Music Style Modelling by Recurrent Neural Networks with Long Short Term Memory Units. *International Society for Music Information Retrieval (ISMIR) conference, October 2015. (late-breaking demo)* [pdf, code]

Iryna Korshunova Classification of functional data with free knots splines. *System Research and Information Technologies 2014, 115–124*; [abstract]

Projects

- 2014** UPenn and Mayo Clinic's Seizure Detection Challenge (Kaggle)
56th place, top 29%
 EEG-based epileptic seizure detection [code]
- 2014** Decoding the Human Brain (Kaggle)
19th place, top 8%
 Decoding of visual stimuli from MEG recordings
- 2013** Numerically stable implementation of Viterbi and Forward-Backward algorithms in the context of HMMs
 [code in C++]
- 2012** Classification of Psychiatric Problems Based on Saccades (IJCNN 2012)
2nd place
- 2012** Application for melody generation and its harmonization
 [code in Java]

Other

Languages

Ukrainian, Russian - native
 English - full professional proficiency
 Dutch - elementary proficiency

Personal interests

Playing cello (currently at Ghent University Symphony Orchestra)