

# Iryna Korshunova

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<b>Location</b>	Ghent, Belgium & London, UK	<b>Website</b>	<a href="https://irakorshunova.github.io">irakorshunova.github.io</a>
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		<b>Kaggle</b>	<a href="https://kaggle.com/golondrina">kaggle.com/golondrina</a>

## Education

2015-2021	PhD in Machine Learning - Ghent University, Belgium Supervisor: Joni Dambre
2017-2020	Visiting PhD student - Gatsby Computational Neuroscience Unit, UCL, London, UK Supervisor: Arthur Gretton
2013-2015	MSc in Statistical Data Analysis - Ghent University, Belgium <i>Magna cum laude</i>
2012-2015	MSc in Applied Mathematics - National Technical University of Ukraine “Kyiv Polytechnic Institute” <i>Diploma with honours</i>
2008-2012	BSc in Applied Mathematics - National Technical University of Ukraine “Kyiv Polytechnic Institute” <i>Diploma with honours</i>

## Extra Courses

2019	Machine Learning Summer School @ University College London (as a tutorial helper)
2018	Gaussian Process Summer School @ University of Sheffield
2018	Microsoft Research AI Summer School @ MSR Cambridge (received a poster prize)
2015	Deep Learning Summer School @ University of Montreal
2015	Machine Learning Summer School @ Max Planck Institute, Tübingen (received a travel stipend)

## Work experience

Summer, 2021	Facebook AI Research, London, UK <i>Research Intern</i> (supervised by Edward Grefenstette)
Spring, 2021	DeepMind, London, UK <i>Research Scientist Intern</i> (supervised by Sven Gowal) Studied adversarial robustness of information bottleneck models
Spring, 2019	Twitter, London, UK <i>Research Intern</i> (supervised by Lucas Theis) Researched logistic LDA – the first discriminative neural topic model (NeurIPS 2019)
Summer, 2017	Twitter, London, UK <i>Research Intern</i> (supervised by Lucas Theis) Pruned neural networks, contributed to pytorch
Summer, 2016	Twitter / Magic Pony Technology, London, UK <i>Research Intern</i> (supervised by Lucas Theis and Ferenc Huszár) Developed a real-time face swapping method based on neural style transfer (ICCV 2017)
Summer, 2013	Grammarly, Kyiv, Ukraine <i>Research Engineer Intern</i> Worked on the evaluation of topic models and their integration into a contextual spell checker

## Awards

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

## Publications

**Iryna Korshunova**, David Stutz, Alex Alemi, Olivia Wiles, Sven Gowal. “A Closer Look at the Adversarial Robustness of Information Bottleneck Models.” *ICML Adversarial Machine Learning Workshop*, 2021

**Iryna Korshunova** “BRUNO: exchangeable deep learning models of predictive distributions.” *Doctoral Thesis*, 2020

**Iryna Korshunova**, Jonas Degraeve, Joni Dambre, Arthur Gretton, Ferenc Huszár. “Exchangeable models in meta reinforcement learning” *4th Lifelong Learning Workshop at ICML*, 2020

**Iryna Korshunova**, Hanchen Xiong, Mateusz Fedoryszak, Lucas Theis. “Discriminative topic modeling with logistic LDA” *Neural Information Processing Systems (NeurIPS)*, 2019; [arXiv:1909.01436](#)

**Iryna Korshunova**, Yarin Gal, Joni Dambre, Arthur Gretton. “Conditional BRUNO: a deep recurrent process for exchangeable labelled data” *European Symposium on Artificial Neural Networks (ESANN)*, 2019; *NeurIPS workshop on Bayesian Deep Learning*, 2018.

**Iryna Korshunova**, Jonas Degraeve, Ferenc Huszár, Yarin Gal, Arthur Gretton, Joni Dambre. “BRUNO: a deep recurrent model for exchangeable data” *Neural Information Processing Systems (NeurIPS)*, 2018; [arXiv:1802.07535](#)

Lucas Theis, **Iryna Korshunova**, Alykhan Tejani, Ferenc Huszár. “Faster gaze prediction with dense networks and Fisher pruning” *Preprint* [arXiv:1801.05787](#), 2018.

**Iryna Korshunova**, Wenzhe Shi, Joni Dambre, Lucas Theis. “Fast face-swap using convolutional neural networks” *International Conference on Computer Vision (ICCV)*, 2017; [arXiv:1611.09577](#)

**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

Benjamin H. Brinkmann, Joost Wagenaar,..., **Iryna Korshunova** et al. “Crowdsourcing reproducible seizure forecasting in human and canine epilepsy” *Brain*, 2016, 139 (6) 1713-1722

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*; [arXiv:1604.08723](#)

Bob L. Sturm, João F. Santos, **Iryna Korshunova**. “Folk music style modelling by recurrent neural networks with long short term memory units” *ISMIR, late-breaking demo session*, 2015

**Iryna Korshunova** “Epileptic seizure prediction using deep learning” *Master’s dissertation*, 2015

## Other

**Programming languages and frameworks:** python, jax, tensorflow, pytorch, theano

**Languages:** Ukrainian, Russian, Dutch, English

**Reviewer:** NeurIPS 2018, 2019, 2020, 2021; ICLR 2019; AISTATS 2021

**Hobbies:** playing cello, swing dancing, drawing