

# Artyom Gadetsky

Bayesian Methods Research Group, Moscow, Russia  
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## EDUCATION

### National Research University Higher School of Economics

Moscow, Russia

- Ph.D. in Computer Science 2020 – Present
  - Scientific supervisor: Dmitry Vetrov
  - Thesis: Monte Carlo Gradient Estimation for Discrete Latent Variable Models

### National Research University Higher School of Economics

#### Skolkovo Institute of Science and Technology

Moscow, Russia

- M.S. in Statistical Learning Theory 2018 – 2020
  - Degree with honors
  - GPA: 4.84 / 5

### National Research University Higher School of Economics

Moscow, Russia

- B.S. in Computer Science, Machine Learning Major 2014 – 2018
  - Degree with honors
  - GPA: 4.76 / 5

## WORK EXPERIENCE

### Bayesian Methods Research Group

Moscow, Russia

- Supervisor: Dmitry Vetrov 2016 – Present
  - Description: conducting research on deep learning and bayesian machine learning, particularly variance reduction techniques for structured discrete latent variables models.

### Sberbank-HSE Laboratory

Moscow, Russia

- Supervisor: Evgeny Sokolov 2017 – Present
  - Description: conducting research on different tasks financed by Sberbank Russia

## RESEARCH EXPERIENCE

### National Research University Higher School of Economics

Moscow, Russia

- Topic: Monte Carlo Gradient Estimation for Discrete Latent Variable Models Present
  - Supervisor: Dmitry Vetrov
  - Description: research on variance reduction techniques for structured discrete latent variable models.

### National Research University Higher School of Economics, Moscow, Russia

#### University of Sussex, Falmer, UK

- Topic: Variance reduction techniques for Plackett-Luce distribution Aug 2018 – Jan 2020
  - Supervisors: Dmitry Vetrov, Novi Quadrianto
  - Description: Conducting research on causal inference and variance reduction techniques for discrete latent variable models with applications in structure learning of Directed Acyclic Graphs (DAGs).

### National Research University Higher School of Economics

Moscow, Russia

- Topic: Conditional Generators of Words Definitions Oct 2016 – Aug 2018
  - Supervisor: Dmitry Vetrov
  - Description: Work proposes conditional language model for word's definitions. Conducted experiments show that one particular word embedding contains information about most meanings of the corresponding word and that particular components of word embeddings can be interpretable.

## Graphics and Media Lab, Moscow State University

Moscow, Russia

- Topic: Multiple Object Tracking
  - Supervisor: Anton Konushin
  - Description: Research on application of CNNs for tracking people in the crowd

Jul 2016 – Aug 2016

## National Research University Higher School of Economics

Moscow, Russia

- Topic: 2D Scene Parsing with Generative Models
  - Supervisor: Anton Konushin
  - Description: Application of CNN for object classification and object labeling to set of synthetic data

Dec 2015 – Jun 2016

## National Research University Higher School of Economics

Moscow, Russia

- Topic: Road Sign Classification
  - Supervisor: Anton Konushin
  - Description: Achieved 98 % accuracy in multiclass road sign classification using HOG and SVM

Jul 2015 – Aug 2015

## PUBLICATIONS

(\* denotes equal contribution)

### CONFERENCES

*Latent Structure Learning Through Stochastic Invariant*

Kirill Struminsky\*, **Artyom Gadetsky\***, Denis Rakitin\*, Danil Karpushkin, Dmitry Vetrov

The 35th Conference on Neural Information Processing Systems (NeurIPS), 2021

*Low-variance Black-box Gradient Estimates for the Plackett-Luce Distribution* (oral)

**Artyom Gadetsky\***, Kirill Struminsky\*, Chris Robinson, Novi Quadrianto, Dmitry Vetrov

In proceedings of the 34th AAAI Conference on Artificial Intelligence (AAAI), 2020

*Conditional Generators of Words Definitions* (poster session)

**Artyom Gadetsky**, Ilya Yakubovsky, Dmitry Vetrov

In proceedings of the 56th Annual Meeting of the Association for Computational Linguistics (ACL), 2018

*Conditional Generators of Words Definitions* (poster session)

**Artyom Gadetsky**, Ilya Yakubovsky, Dmitry Vetrov

Best Student Work at DIALOGUE 2018

*Conditional Generators of Words Definitions* (poster session)

**Artyom Gadetsky**, Ilya Yakubovsky, Dmitry Vetrov

Presented poster at AINL 2017

### WORKSHOPS

*Low-variance Gradient Estimates for the Plackett-Luce Distribution* (spotlight)

**Artyom Gadetsky\***, Kirill Struminsky\*, Chris Robinson, Novi Quadrianto, Dmitry Vetrov

In proceedings of the Bayesian Deep Learning NeurIPS 2019 Workshop

## AWARDS

- The Ilya Segalovich Scholarship 2021  
Description: Winner
- The Ilya Segalovich Award 2020  
Description: Winner
- Increased State Academic Scholarship 2019/2020  
Description: Winner in the scientific research section (receiving during spring semester)
- The Ilya Segalovich Scholarship 2019  
Description: Winner
- Open HSE Student Research Paper Competition 2018  
Description: Winner (3rd absolute place)
- Increased State Academic Scholarship 2018/2019  
Description: Winner in the scientific research section (receiving during autumn semester)
- DIALOGUE 2018 conference  
Description: Best Student Work for "Conditional Generators of Words Definitions"

## NOMINATIONS

- The Ilya Segalovich Award 2019

	<ul style="list-style-type: none"> <li>Description: Finalist</li> <li>■ Silver Nestling Golden HSE Award 2018 Description: Finalist</li> <li>■ The Ilya Segalovich Scholarship 2017 Description: Nominee</li> <li>■ The Ilya Segalovich Scholarship 2016 Description: Nominee</li> </ul>	
<b>REVIEWING</b>	<ul style="list-style-type: none"> <li>■ ACL 2020, AAAI 2021</li> </ul>	
<b>TALKS</b>	<ul style="list-style-type: none"> <li>AAAI 2020 conference (in english) Topic: Low-variance Black-box Gradient Estimates for the Plackett-Luce Distribution</li> <li>DataFest 2018 (in russian) Topic: Conditional Generators of Words Definitions</li> <li>DIALOGUE 2018 (in russian) Topic: Word Sense Induction and Definition Modeling</li> </ul>	
<b>OTHER EXPERIENCE</b>	<ul style="list-style-type: none"> <li>■ Microsoft Research AI Summer School 2018</li> <li>■ Visiting scholar at the University of Sussex, UK, July-August 2019 Description: hosted by Novi Quadrianto</li> <li>■ Visiting scholar at the University of Sussex, UK, November 2019 Description: hosted by Novi Quadrianto</li> </ul>	
<b>TEACHING</b>	<ul style="list-style-type: none"> <li>■ Continuous Optimization course at HSE and MSU Role: Teaching fellow</li> <li>■ Neurobayesian Methods at HSE, MSU and YSDA Role: Teaching fellow</li> <li>■ Introduction to Deep Learning at HSE Role: Teaching fellow</li> <li>■ Data Analysis course at HSE Role: Teaching fellow</li> <li>■ DeepBayes 2019 Summer School Role: Teaching assistant</li> <li>■ DeepBayes 2018 Summer School Role: Teaching assistant</li> <li>■ DeepBayes 2017 Summer School Role: Teaching assistant</li> <li>■ Coursera "Bayesian Methods in Machine Learning" course Role: Teaching assistant</li> <li>■ "Bayesian Methods in Machine Learning" course at YSDA and CMC MSU Role: Teaching assistant</li> <li>■ Machine Learning course at CS HSE Role: Teaching assistant</li> </ul>	<ul style="list-style-type: none"> <li>Present</li> <li>Present</li> <li>2018-2021</li> <li>2018</li> <li>Aug 2018</li> <li>Aug 2018</li> <li>Aug 2017</li> <li>2017-2018</li> <li>2017-2018</li> <li>Sep 2017 – Jul 2018</li> </ul>
<b>LANGUAGES</b>	<ul style="list-style-type: none"> <li>■ Russian: Mother tongue.</li> <li>■ English: Fluent</li> </ul>	
<b>SKILLS</b>	<ul style="list-style-type: none"> <li>■ Machine Learning, Deep Learning, Probabilistic Machine Learning</li> <li>■ Python, Pytorch, Feel free with Linux</li> </ul>	