

Artyom Gadetsky

PhD student at MLBio EPFL, Lausanne, Switzerland

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RESEARCH INTERESTS

Unsupervised Learning, Representation Learning, Foundation Models, Generative AI, Probabilistic Modeling, Stochastic Gradient Estimation, Structured Discrete Variables, Monte Carlo Methods, Deep Learning, Machine Learning.

PUBLICATIONS

(* denotes equal contribution)

CONFERENCES

Let Go of Your Labels with Unsupervised Transfer

Artyom Gadetsky*, Yulun Jiang*, , Maria Brbić

The 41st International Conference on Machine Learning (ICML), 2024

Fine-grained Classes and How to Find Them

Matej Grcić*, **Artyom Gadetsky***, Maria Brbić

The 41st International Conference on Machine Learning (ICML), 2024

The Pursuit of Human Labeling: A New Perspective on Unsupervised Learning (spotlight)

Artyom Gadetsky, Maria Brbić

The 37th Conference on Neural Information Processing Systems (NeurIPS), 2023

Leveraging Recursive Gumbel-Max Trick for Approximate Inference in Combinatorial Spaces

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

- EPFL EDIC Fellowship 2022-2023
Description: EPFL Fellowship for highly selected first year Phd students
- The Ilya Segalovich Scholarship 2021
Description: HSE Computer Science Faculty scholarship for outstanding achievements in study and research
- The Ilya Segalovich Award 2020
Description: Award for outstanding young researchers in CIS region (highly competitive)
- Increased State Academic Scholarship 2019/2020
Description: Winner in the scientific research section (receiving during spring semester)
- The Ilya Segalovich Scholarship 2019
Description: HSE Computer Science Faculty award for outstanding achievements in study and research
- 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"

RESEARCH EXPERIENCE

MLBio

- Topic: Towards Unsupervised Transfer Learning Sep 2022 – Present
 - Supervisor: Maria Brbic
 - Description: research on unsupervised and representation learning

BayesGroup

- Topic: Monte Carlo Gradient Estimation for Discrete Latent Variable Models Jan 2020 – Aug 2022
 - Supervisor: Dmitry Vetrov
 - Description: research on variance reduction techniques for structured discrete latent variable models.

BayesGroup & Predictive Analytics Lab @ University of Sussex

- 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).

BayesGroup

- 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

- Topic: Multiple Object Tracking Jul 2016 – Aug 2016
 - Supervisor: Anton Konushin
 - Description: Research on application of CNNs for tracking people in the crowd

Graphics and Media Lab

- Topic: 2D Scene Parsing with Generative Models Dec 2015 – Jun 2016
 - Supervisor: Anton Konushin
 - Description: Application of CNN for object classification and object labeling to set of synthetic data

Graphics and Media Lab

- Topic: Road Sign Classification Jul 2015 – Aug 2015
 - Supervisor: Anton Konushin
 - Description: Achieved 98 % accuracy in multiclass road sign classification using HOG and SVM

INDUSTRIAL EXPERIENCE

Huawei Research Moscow

Moscow, Russia

- Supervisor: Dmitry Vetrov 2020 – 2022
 - Description: conducting research on knowledge distillation and domain generalization.

Sberbank-HSE Laboratory

Moscow, Russia

- Supervisor: Evgeny Sokolov 2017 – 2020
 - Description: conducting research on different text generative modeling tasks.

STUDENT CO-SUPERVISION

- Yulun Jiang (now PhD at EPFL)
 - Topic: unsupervised transfer learning

TEACHING EXPERIENCE

- Calculus II at EPFL Present
Role: Teaching fellow
- Deep Learning in Biomedicine at EPFL Present
Role: Teaching fellow
- Transfer Learning and Meta-Learning at EPFL Present
Role: Teaching fellow
- Continuous Optimization course at HSE and MSU 2018 – 2022
Role: Teaching fellow

	<ul style="list-style-type: none"> ▪ Neurobayesian Methods at HSE, MSU and YSDA Role: Teaching fellow 	2018 – 2022
	<ul style="list-style-type: none"> ▪ Introduction to Deep Learning at HSE Role: Teaching fellow 	2018-2021
	<ul style="list-style-type: none"> ▪ Data Analysis course at HSE Role: Teaching fellow 	2018
	<ul style="list-style-type: none"> ▪ DeepBayes 2019 Summer School Role: Teaching assistant 	Aug 2018
	<ul style="list-style-type: none"> ▪ DeepBayes 2018 Summer School Role: Teaching assistant 	Aug 2018
	<ul style="list-style-type: none"> ▪ DeepBayes 2017 Summer School Role: Teaching assistant 	Aug 2017
	<ul style="list-style-type: none"> ▪ Coursera "Bayesian Methods in Machine Learning" course Role: Teaching assistant 	2017-2018
	<ul style="list-style-type: none"> ▪ "Bayesian Methods in Machine Learning" course at YSDA and CMC MSU Role: Teaching assistant 	2017-2018
	<ul style="list-style-type: none"> ▪ Machine Learning course at CS HSE Role: Teaching assistant 	Sep 2017 – Jul 2018
REVIEWER EXPERIENCE	<ul style="list-style-type: none"> ▪ ICML 2024 ▪ ICLR 2024 ▪ NeurIPS 2023 ▪ AAAI 2021 ▪ ACL 2020 	
OTHER EXPERIENCE	<ul style="list-style-type: none"> ▪ Microsoft Research AI Summer School 2018 Description: hosted by Novi Quadrianto ▪ Visiting scholar at the University of Sussex, UK Description: hosted by Novi Quadrianto ▪ Visiting scholar at the University of Sussex, UK Description: hosted by Novi Quadrianto 	<p>Jul 2018</p> <p>Jul 2019 – Aug 2019</p> <p>Nov 2019</p>
TALKS	<ul style="list-style-type: none"> University of Amsterdam AMLab Seminar (in english) Topic: Leveraging Recursive Gumbel-Max Trick for Approximate Inference in Combinatorial Spaces AAAI 2020 conference (in english) Topic: Low-variance Black-box Gradient Estimates for the Plackett-Luce Distribution DataFest 2020 (in russian) Topic: Low-variance Black-box Gradient Estimates for the Plackett-Luce Distribution DataFest 2018 (in russian) Topic: Conditional Generators of Words Definitions DIALOGUE 2018 (in russian) Topic: Word Sense Induction and Definition Modeling 	<p>Nov 2021</p> <p>Feb 2020</p> <p>Oct 2020</p> <p>Apr 2018</p> <p>Jun 2018</p>
EDUCATION	<p>École Polytechnique Fédérale de Lausanne Lausanne, Switzerland</p> <ul style="list-style-type: none"> ▪ Ph.D. in Computer and Communication Sciences <ul style="list-style-type: none"> • Scientific supervisor: Maria Brbic • Thesis: Towards Unsupervised Transfer Learning <p>National Research University Higher School of Economics Skolkovo Institute of Science and Technology Moscow, Russia</p> <ul style="list-style-type: none"> ▪ M.S. in Statistical Learning Theory <ul style="list-style-type: none"> • Degree with honors • GPA: 4.84 / 5 <p>National Research University Higher School of Economics Moscow, Russia</p> <ul style="list-style-type: none"> ▪ B.S. in Computer Science, Machine Learning Major <ul style="list-style-type: none"> • Degree with honors • GPA: 4.76 / 5 	<p>2022 – Present</p> <p>2018 – 2020</p> <p>2014 – 2018</p>

NOMINATIONS

- The Ilya Segalovich Award 2019
Description: Finalist
- Silver Nestling Golden HSE Award 2018
Description: Finalist
- The Ilya Segalovich Scholarship 2017
Description: Nominee
- The Ilya Segalovich Scholarship 2016
Description: Nominee