

Artyom Gadetsky

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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)

	<ul style="list-style-type: none"> ▪ DIALOGUE 2018 conference Description: Best Student Work for "Conditional Generators of Words Definitions" 	
RESEARCH EXPERIENCE	<p>MLBio</p> <ul style="list-style-type: none"> ▪ Topic: Towards Unsupervised Transfer Learning • Supervisor: Maria Brbic • Description: research on unsupervised and representation learning <p>BayesGroup</p> <ul style="list-style-type: none"> ▪ Topic: Monte Carlo Gradient Estimation for Discrete Latent Variable Models • Supervisor: Dmitry Vetrov • Description: research on variance reduction techniques for structured discrete latent variable models. <p>BayesGroup & Predictive Analytics Lab @ University of Sussex</p> <ul style="list-style-type: none"> ▪ Topic: Variance reduction techniques for Plackett-Luce distribution • 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). <p>BayesGroup</p> <ul style="list-style-type: none"> ▪ Topic: Conditional Generators of Words Definitions • 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. <p>Graphics and Media Lab</p> <ul style="list-style-type: none"> ▪ Topic: Multiple Object Tracking • Supervisor: Anton Konushin • Description: Research on application of CNNs for tracking people in the crowd <p>Graphics and Media Lab</p> <ul style="list-style-type: none"> ▪ 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 <p>Graphics and Media Lab</p> <ul style="list-style-type: none"> ▪ Topic: Road Sign Classification • Supervisor: Anton Konushin • Description: Achieved 98 % accuracy in multiclass road sign classification using HOG and SVM 	<p>Sep 2022 – Present</p> <p>Jan 2020 – Aug 2022</p> <p>Aug 2018 – Jan 2020</p> <p>Oct 2016 – Aug 2018</p> <p>Jul 2016 – Aug 2016</p> <p>Dec 2015 – Jun 2016</p> <p>Jul 2015 – Aug 2015</p>
INDUSTRIAL EXPERIENCE	<p>Huawei Research Moscow Moscow, Russia</p> <ul style="list-style-type: none"> ▪ Supervisor: Dmitry Vetrov • Description: conducting research on knowledge distillation and domain generalization. <p>Sberbank-HSE Laboratory Moscow, Russia</p> <ul style="list-style-type: none"> ▪ Supervisor: Evgeny Sokolov • Description: conducting research on different text generative modeling tasks. 	<p>Present</p> <p>2017 – 2020</p>
STUDENT CO-SUPERVISION	<ul style="list-style-type: none"> ▪ Yulun Jiang (now PhD at EPFL) • Topic: unsupervised transfer learning 	
TEACHING EXPERIENCE	<ul style="list-style-type: none"> ▪ Calculus II at EPFL Role: Teaching fellow ▪ Deep Learning in Biomedicine at EPFL Role: Teaching fellow ▪ Transfer Learning and Meta-Learning at EPFL Role: Teaching fellow ▪ Continuous Optimization course at HSE and MSU Role: Teaching fellow 	<p>Present</p> <p>Present</p> <p>Present</p> <p>2018 – 2022</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