

## Daryna Dementieva

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**RESEARCH INTERESTS** natural language processing for social good, fake news detection, multilingualism, hate speech combating, text detoxification, text style transfer, explainable AI

**EDUCATION** November 2019 – September 2022  
**Ph.D. in Computer Science**  
Skolkovo Institute of Science and Technology (Skoltech), Moscow  
*Thesis:* [Methods for Fighting Harmful Multilingual Information](#)  
*Supervisor:* [Ass. Prof. Alexander Panchenko](#)  
*Links:* [information](#) and [video](#) of the defense

September 2017 – August 2019  
**Master of Science in Applied Math and Physics**  
Moscow Institute of Science and Technology (MIPT), Moscow  
*Thesis:* [News Aggregation and Personalization for Professional Groups](#)  
*Supervisor:* [Prof. Konstantin Vorontsov](#)

September 2013 – August 2017  
**Bachelor of Science in Applied Math**  
Taras Shevchenko's Kyiv National University (KNU), Kyiv

**EXPERIENCE** **Postdoctoral Researcher** TUM Munich  
Jun 2022 - now  
*Teaching:* Lab Courses, Bachelors, and Masters theses supervision; NLP lectures.  
*Research Projects:* eXplainable AI (XAI) for NLP models; Safe and Fair Human-written and Machine-generated Texts; Multilingual and Ukrainian NLP.

**Research Engineer** Skoltech Moscow  
Mar 2021 - Mar 2022  
Leading the *Text Detoxification* project connected with PhD studies.  
The results of the research were formed as 2 ACL papers, 1 journal paper, [RUSSE'22](#) shared task, and were deployed into [MTS.AI](#) chatbot.

**Data Science Intern** Beiersdorf Hamburg  
Jun 2018 - Aug 2018  
Concept design and prototype development of the automatic trends extractor from texts from social networks.

**Data Scientist** Visiology Moscow  
Aug 2017 - Aug 2019  
*NLP2SQL:* Chat-bot assistant for Business Intelligence.  
The chat-bot was presented at Business Intelligence 2.0 conference (1.5k attendees) as the first Russian BI chat-bot and was deployed as [ViTalk](#).

### SELECTED PUBLICATIONS (GOOGLE SCHOLAR)

**D Dementieva**, D Moskovsky, D Dale, A Panchenko, "Cross-lingual Text Style Transfer: The Case of Text Detoxification", *AACL* 2023

E Mosca, **D Dementieva**, T Ajdari, M Kummeth, K Gringauz, Y Zhou, G Groh, "IFAN: An Explainability-Focused Interaction Framework for Humans and NLP Models", *AACL* 2023

**D Dementieva**, M Kuimov, A Panchenko, “[Multiverse: Multilingual Evidence for Fake News Detection](#)”, *Journal of Imaging*, 2023

V Logacheva\*, **D Dementieva\***, S Ustyantsev, D Moskovskiy, D Dale, I Krotova, N Semenov, A Panchenko, “[ParaDetox: Detoxification with Parallel Data](#)”, *ACL*, 2022

D Dale, A Voronov, **D Dementieva**, V Logacheva, O Kozlova, N Semenov, A Panchenko, “[Text Detoxification using Large Pre-trained Neural Models](#)”, *EMNLP*, 2021

**D Dementieva**, D Moskovskiy, V Logacheva, D Dale, O Kozlova, N Semenov, A Panchenko, “[Methods for detoxification of texts for the russian language](#)”, *MDPI*, 2021

E Kasneci, K Seßler, S Küchemann, M Bannert, **D Dementieva**, F Fischer, ... G Kasneci. “[ChatGPT for good? On opportunities and challenges of large language models for education](#)”. *Learning and individual differences*, 2023

**D Dementieva**, A Panchenko, “[Cross-lingual Evidence Improves Monolingual Fake News Detection](#)”, *ACL SRW*, 2021

## TALKS AND POSTERS

*Adam-Smith at SemEval-2023 Task 4: Discovering Human Values in Arguments with Ensembles of Transformer-based Models*  
15 June, 2023, [ACL 2023](#), [SemEval Workshop](#), Toronto, Canada, **talk**

*AdamR at SemEval-2023 Task 10: Solving the Class Imbalance Problem in Sexism Detection with Ensemble Learning*  
16 June, 2023, [ACL 2023](#), [SemEval Workshop](#), Toronto, Canada, **poster**

*Methods for Fighting Harmful Multilingual Information*  
27 June, 2023, [Mannheim NLP Group](#), Mannheim, Germany, **talk**

*Methods for Text Style Transfer: Text Detoxification Case*  
18 April, 2023, [PyCon&PyData](#), Berlin, Germany, **talk**

*Methods for Fighting Harmful Multilingual Information*  
1 November, 2022, [Language Technology Group](#), Hamburg, Germany **talk**

*NLP for Social Good: Methods for Fighting Harmful Multilingual Textual Content*  
26 October, 2022, [MunichNLP](#), Germany **talk**

*Methods for Text Style Transfer: Text Detoxification Case*  
20 October 2022, [MilanoNLP](#), online **talk**

*Methods for Fighting Harmful Multilingual Information*  
15 June 2022, [CIS LMU](#), Munich, Germany **talk**

*A Study on Manual and Automatic Evaluation for Text Style Transfer: The Case of Text Detoxification*  
25 May 2022, [ACL 2022 HumEval Workshop](#), Dublin, Ireland **talk**

*ParaDetox: Detoxification with Parallel Data*  
27 May 2022, [ACL 2022](#), Dublin, Ireland, **poster**

*Fake News Detection using Multilingual Evidence*  
July 2021, [TrustWorthy AI](#), Moscow, Russia **talk**

*Virtual Assistant ViTalk or Human Business Intelligence*  
May 2019, [DataFest](#), Moscow, Russia **talk**

## TEACHING EXPERIENCE

**NLP Lab Course, XAI for Machine Learning**, TUM, 2022-2023: projects supervision.  
**Natural Language Processing**, TUM, 2022-2023: lecturer.  
**Statistical NLP, Neural NLP**, Skoltech, 2019-2021: seminars, projects supervision.

## MENTORING

Arda Andirin (Masters, 2024, TUM) *“Explainable Fact-Checking in News Datasets with Large Language Models”* (ongoing)

Shaghayegh Koli (Masters, 2024, TUM) *“Fake News and Machine-generated Text Detection for Persian and English”* (ongoing)

Valeriia Khylenko (Masters, 2024, TUM) *“Cross-lingual Text Classification Knowledge Transfer to Ukrainian language”* (ongoing)

Adam Rydelek (Masters, 2023, TUM) *“Sexism in Social Media – Explainable Detection Using Deep Learning Models”* ([paper](#))

Daniel Schroter (Masters, 2023, TUM) *“Discovering Human Values Behind Arguments – A Case for Transformer-based Models and Explainable AI”* ([paper](#))

Yen-Yu Chang (Masters, 2023, TUM) *“Exploration of Approaches to Counter Hate Speech: The Case of Sexist Speech”*

Yuliana Poliakova (Bachelor, 2023, TUM) *“Detecting the Persuasion Techniques in Online News”*

Daniil Moskovsky (Masters, 2022, Skoltech) *“Supervised Text Detoxification Methods”* ([paper](#))

Mikhail Kuimov (Masters, 2022, Skoltech) *“Multilingual and Cross-lingual Approaches to Processing of News Texts”* ([paper](#))

## OPENSOURCE CONTRIBUTION ([GITHUB](#)) ([HUGGINGFACE](#))

**One of the admins** of [s-nlp](#) with contributions:

- the first of its kind [En-](#) and [Ru-ParaDetox](#) datasets for text detoxification;
- English [roberta\\_toxicity\\_classifier](#) and Russian [russian\\_toxicity\\_classifier](#);
- SOTA text detoxification models for [English](#) and [Russian](#);
- SOTA multilingual formality [classifier](#).

All research about Text Detoxification project summarized at the [github](#) page.

**Establisher** of [tum-nlp](#) with contributions:

- SOTA human values [detector](#);
- target-aware counter speech [generator](#);
- sexism speech [detector](#).

**Personal** contribution to SOTA Ukrainian toxicity [detector](#).

All together >200k downloads.

## PUBLIC SERVICE

Mentor in [Women In NLP, Munich](#) and [CyberMentor](#) to support young women in STEM education.

REVIEWER	<p>ARR: October 2023, August 2023, June 2023</p> <p>ACL: 2023, 2022, 2021, 2020</p> <p>EMNLP: 2023, 2022, 2021, 2020</p> <p>WOAH: 2023</p> <p>HCI: 2023</p> <p>VLDB: 2023, 2021</p> <p>DSAA: 2020</p>
SUMMER& WINTER SCHOOLS	<p><a href="#">ELLIS Summer School on Large-Scale AI for Research and Industry</a>, Modena, Italy, September 2023</p> <p><a href="#">Advanced Language Processing Winter School (ALPS)</a>, Grenoble, France, January 2022</p> <p><a href="#">Advanced Language Processing Winter School (ALPS)</a>, Grenoble (online), France, January 2021</p> <p><a href="#">The Machine Learning Summer School (MLSS)</a>, Tübingen (online), Germany, June 2020</p>
AWARDS	<p><b>Junction 2021, Empathy Challenge:</b> <i>third prize</i>. The adaptation of text detoxification research results for a gaming industry use-case.</p> <p><b>Junction 2019, Ericsson Challenge:</b> <i>second prize</i>. The algorithm development for optimal client-taxi matching and transportation around the city.</p> <p><b>P&amp;G 2018 IT Business Challenge:</b> grant <i>winner</i> to represent East Europe region at the in-person 5-day challenge in Athens, Greece.</p> <p><b>Innopolis 2015 Programming Contest:</b> <i>winner</i>.</p>
INTERESTS	jogging, yoga, yachting, (wind)surfing, psychology, feminism
LANGUAGES	<p><b>Ukrainian:</b> native</p> <p><b>Russian:</b> native</p> <p><b>English:</b> professional</p> <p><b>German:</b> intermediate</p>