Viktor Moskvoretskii

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AI Researcher with focus on NLP: LLM Trustworthiness, Lexical Semantics and Self-Improvement.

Education

M.S. in Machine Learning – HSE University, Moscow

2023 - 2025

CGPA: 4/4

Thesis: "Self-Improvement for LLM"

Advisors: Irina Nikishina and Chris Biemann

Graduate Program in AI and Applied Mathematics (with honors) – MSU, Moscow

2021 - 2023

CGPA: 3.65/4

Final project: "Multi-Class Persuasive Content Identification and Relation Extraction in News Text"

Advisor: Konstantin Vorontsov

B.S. in Neuroscience (with honors) – HSE University, Moscow

2018 - 2022

CGPA: 3.95/4

Thesis: "Advanced Emprical Research on Grapheme-Color Synesthesia Induction With V4 tDCS Stimulation"

Advisors: Oksana Zinchenko and Alexey Gorin

Link: Publication

Work Experience

Research Engineer — Skoltech

07.2023 — Present

- LLM for Lexical Semantics
- Machine Translation
- LLM Trustworthiness, Mitigating Hallucinations
- LLM Efficiency: PEFT and Compression
- Multivariate Time-Series Unsupervised Learning

Intern Researcher — Machine Learning and Semantic Analysis Lab

01.2023 - 07.2023

• Multi-Class Persuasive Content Identification and Relation Extraction in News Text

Intern Researcher — DeepPavlov.ai

08.2022 - 06.2023

• Image2Text Dialogue System Research

Data Scientist — VTB Housing Ecosystem

07.2020 - 07.2021

• Development of Internal Text Data Analysis Product, Sentiment Analysis

Intern Researcher — HSE UX Lab

09.2019 - 03.2020

• Data analysis, statistical modeling in Neuroscience

Publications

- [Accepted to EMNLP 2024]: **Moskvoretskii, Viktor**, et al. "Low-Resource Machine Translation through the Lens of Personalized Federated Learning." arXiv preprint arXiv:2406.12564 (2024).
- Viktor Moskvoretskii, Ekaterina Neminova, Alina Lobanova, Alexander Panchenko, and Irina Nikishina. 2024. TaxoLLaMA: WordNet-based Model for Solving Multiple Lexical Semantic Tasks. In Proceedings of the 62nd Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers), pages 2331–2350, Bangkok, Thailand. Association for Computational Linguistics.
- Andreev, S., **Moskvoretskii, V.**, Gorin, A., & Zinchenko, O. (2024). Grapheme-color synesthesia induction with V4 transcranial direct current stimulation. Current Psychology, 1-6.
- Andreev, S., **Moskvoretskii**, V., Gorin, A., & Zinchenko, O. (2023). Induction of grapheme-color synesthesia-like effects in non-synesthetes via offline anodal tdcs over visual cortex in area v4.

 Brain Stimulation: Basic, Translational, and Clinical Research in Neuromodulation, 16(1), 274.

A, B

• Moskvoretskii, V., Panchenko, A., & Nikishina, I. (2024, May). Are Large Language Models Good at Lexical Semantics? A Case of Taxonomy Learning. In Proceedings of the 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING 2024) (pp. 1498-1510).

Preprint, Local Conference

- [Submitted to KDD 2025]: **Moskvoretskii, Viktor**, et al. "MLEM: Generative and Contrastive Learning as Distinct Modalities for Event Sequences." arXiv preprint arXiv:2401.15935 (2024).
- [Submitted to ICLR 2025]: Zhelnin, M., Moskvoretskii, V., Shvetsov, E., Venediktov, E., Krylova, M., Zuev, A., & Burnaev, E. (2024). GIFT-SW: Gaussian noise Injected Fine-Tuning of Salient Weights for LLMs. arXiv preprint arXiv:2408.15300.
- [Submitted to ICLR 2025]: Osin, D., Udovichenko, I., **Moskvoretskii**, V., Shvetsov, E., & Burnaev, E. (2024). EBES: Easy Benchmarking for Event Sequences. arXiv preprint arXiv:2410.03399.
- Moskvoretskii, V., Frolov, A., & Kuznetsov, D. IMAD: IMage-Augmented multi-modal dialogue. Investigations on applied mathematics and informatics . Part II–1, Zap. Nauchn. Sem. POMI, 529, 102-122.

Awards

Yandex Scholarship 2024 — Awarded for exceptional GPA and significant research contributions in 2024.

HSE Academic Scholarship 2024 — Awarded for outstanding academic performance in 2024.

HSE Best Paper 2023 — HSE 2023 best student paper award

Student Supervision

6. Ekaterina Neminova (Sep 2023—now, HSE)

BSc thesis co-supervision with Irina Nikishina: "Investigation of Large Language Models for the Taxonomy-related Tasks"

led to ACL paper: "TaxoLLaMA: WordNet-based Model for Solving Multiple Lexical Semantic Tasks"

5. Alina Lobanova (Sep 2023—now, HSE)

BSc thesis co-supervision with Irina Nikishina: "Multilingual Large Language Models for predicting IS-A relationships"

led to ACL paper: "TaxoLLaMA: WordNet-based Model for Solving Multiple Lexical Semantic Tasks"

4. Vladimir Ganzhara (Sep 2024—now, HSE)

MS project supervision: "Aligning LLM Confidence with Truthfulness with Self-Play"

3. Gleb Stenin (Sep 2024—now, HSE)

MS project supervision: "Aligning LLM Confidence with Truthfulness with Self-Play"

2. Vlad Knyazhevski (Sep 2024—now, HSE)

MS project supervision: "Aligning LLM Confidence with Truthfulness with Self-Play"

1. Luiza Nigogosova (Sep 2024—now, HSE)

MS project supervision: "Aligning LLM Confidence with Truthfulness with Self-Play"

Teaching Experience

2024-2025 Neural Natural Language Processing (en) — HSE, Moscow

Role: Lecturer and Seminarian Duration: Terms 1, 2 and 3

Audience: 4th year BSc students in Fundamental and Applied Linguistics

Links: Github

2023-2024 Neural Natural Language Processing (en) — HSE, Moscow

Role: Lecturer, Seminarian, Preparing Homework

Duration: Terms 1, 2 and 3

Audience: 4th year BSc students in Fundamental and Applied Linguistics

Links: Github

2024 Tensor Decomposition for DL (en) — Skoltech, Moscow

Role: Lecturer, Seminarian, Preparing Homework

Duration: Term 1

Audience: Industrial AI Researchers

Links: Github

2024 Tensor Decomposition for DL (en) — Deep School, Moscow

Role: Lecturer, Seminarian, Preparing Homework

Duration: Term 3

Audience: Industrial AI Researchers

Links: Github

Reviewing

ICLR 3 papers in 2024 as reviewer

ACL 4 papers in 2024 as sub-reviewer

EMNLP 4 papers in 2024 as sub-reviewer

COLING 3 papers in 2024 as sub-reviewer

AINL 1 paper in 2024 as reviewer

Additional Education

Aug 2023 AI Summer School by Skoltech

Jul 2023 Generative Modeling and RL Summer School by AIRI

May 2023 Generative Modeling and AI Theory Summer School by HSE

Feb 2023 Applied Informatics and Mathematics Winter School by HSE

Jul 2022 NLP and CV Summer School by AIRI

Aug 2020 Machine Learning and Applied Mathematics Summer School by MIPT and IITP RAS