

Daria Kryvosheieva

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Education

Massachusetts Institute of Technology

B.S. in Artificial Intelligence and Decision Making, B.S. in Linguistics

2023—2027

– *Relevant Coursework*: Machine Learning for Molecular Design, Mathematics for Computer Science, Fundamentals of Programming, Introduction to Low-Level Programming in C and Assembly, Language Acquisition [[full coursework](#)]

Experience

Undergraduate Researcher — MIT Computational Psycholinguistics Laboratory

Jan 2024—present

Working with Prof. Roger Levy on targeted evaluation of the grammatical capabilities of multilingual language models, focusing on low-resource languages and grammatical phenomena absent in English.

- Create test suites to assess models' knowledge of split ergativity in Georgian and Hindi, symmetrical voice in Tagalog, noun class agreement in Swahili, case agreement in Ukrainian and Hungarian, and auxiliary verb agreement in Basque.
 - Use the test suites to evaluate models available on HuggingFace (mGPT, BLOOM, M-BERT, XLM-RoBERTa, mT5) by computing conditional surprisals with the minicons Python package.
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Projects

Descry — optical character recognition for low-resource writing systems

Sep 2023—Jan 2024

github.com/dariakryvosheieva/descry | Tensorflow, Flask

Developed a family of CNNs capable of recognizing letters of the Adlam, N'Ko, and Kayah Li alphabets. Collected the datasets, trained the models, visualized filter activations, and deployed the results as a web application.

Tone.me — Mandarin Chinese tone corrector

Oct 2023—Dec 2023

github.com/tone-me/tone-me | pydub, Next.js

Data preprocessing: developed an algorithm to filter incorrectly timestamped syllable audio segments, improving the accuracy of the tone classifier by 6.2%. Web application: frontend (text, responsive UI).

Volunteering

Linguistics Olympiads Problem Committee Member

- *Ukrainian Linguistics Olympiad (11th edition)* Aug 2023—present
Created a problem on Kyrgyz nouns. Co-authored a problem on Kalkatungu morphosyntax. Tested problems proposed by other problem committee members and gave feedback. Graded contestants' works.
 - *Hong Kong Linguistics Olympiad (5th edition)* Feb 2023
Tested and edited the problem set.
 - *Online Linguistics Olympiad (3rd edition)* Oct 2022—Feb 2023
Created an interactive problem on the verbal morphology of Wyandot. Translated the problem set into Ukrainian, Russian, and German and graded contestants' answers in these languages. Wrote announcements for the competition's website and Facebook page.
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Awards

International Linguistics Olympiad

Gold (2023 & 2021), Silver (2022), Bronze (2019)

Asia-Pacific Linguistics Olympiad

Gold (2022 & 2019), Silver (2023 & 2020), Bronze (2021)

North American Computational Linguistics Open Competition

4th rank (2021)

Internationale Deutscholympiade

2nd rank in the B2 division (2020)

Languages

Ukrainian: native; **Russian**: native; **English**: IELTS 8.5 (2022); **German**: ÖSD Zertifikat C1 (2020)