# Daria Kryvosheieva

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## Education

## Massachusetts Institute of Technology

B.S. in Artificial Intelligence and Decision Making, intended double major in Linguistics

2023—2027

GPA: 5.0/5.0

Selected Coursework: Fundamentals of Programming, Mathematics for Computer Science, Introduction to Low-level Programming in C and Assembly, Language Acquisition

# Experience

# Undergraduate Researcher, MIT Computational Psycholinguistics Laboratory

Jan 2024—present

- Working with Prof. Roger Levy on the evaluation and improvement of multilingual LLMs' understanding of grammar.
- Running controlled morphosyntactic evaluations on multilingual LLMs, focusing on low-resource languages and morphosyntactic phenomena absent in English
- Using distributed alignment search to identify model parts responsible for linguistic knowledge
- Finetuning the identified parts with low-rank adaptation

## **Projects**

Descry OCR (github.com/dariakryvosheieva/descry-ocr | PyTorch, Flask)

Sep 2023—Aug 2024

A text recognition engine for low-resource writing systems. Uses CRAFT to detect words on an image and CRNN to recognize individual words.

Tone.me (github.com/tone-me/tone-me | Hugging Face, Next.js)

Oct—Dec 2023

A web app that helps learners of Mandarin Chinese improve their pronunciation of tones. Uses Wav2Vec2 to classify audio recordings of Chinese syllables by tone. Team project for the MIT AIM Labs Fall 2023 program.

### Volunteering

### Linguistics Olympiads Problem Committee Member

• Ukrainian Linguistics Olympiad

Aug 2023—present

- Contributed two problems offered in the 2023/24 contest season. Led training sessions for students selected to represent Ukraine at IOL 2024.
- Hong Kong Linguistics Olympiad (5<sup>th</sup> edition)
  Tested the problem set and provided feedback.

Feb 2023

• Online Linguistics Olympiad (3<sup>rd</sup> edition)

Oct 2022—Feb 2023

Contributed one of the four competition problems. 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.

#### Awards

#### **International Linguistics Olympiad**

Gold Medal (2023, 2021)

## Asia-Pacific Linguistics Olympiad

Result on the Level of Gold Medal (2022)

#### North American Computational Linguistics Open Competition

4<sup>th</sup> rank (2021)

## Languages

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