Anastasia Kuznetsova

Email: anakuzne-at-iu-dot-edu
Phone: (812) 558 80 55
GitHub: github.com/ana-kuznetsova
LinkedIn: Anastasia Kuznetsova

Education

Indiana University — Bloomington, IN, USA
Ph.D. Candidate in Computer Science and Computational Linguistics (Dual major)
Advisors: M. Kim (Chair, UIUC, Computer Science),
F. Tyers (Chair, IU Linguistics) — 2019–Expected 2024

NRU Higher School of Economics — Moscow, Russia
M.A. in Computational Linguistics
Advisor: F.Tyers — 2017–2019

Russian State University for the Humanities — Moscow, Russia
B.A. in Social Anthropology — 2013–2017

Publications

Conference papers

[C5] **Anastasia Kuznetsova**, Aswin Sivaraman, Minje Kim, "The potential of Neural Speech Synthesis-based Data Augmentation for Personalized Speech Enhancement," Proc. 2023 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2023, 1 – 5.

[C4] **Anastasia Kuznetsova**, Anurag Kumar, Jennifer Drexler-Fox and Francis Tyers, "Curriculum Optimization for Low-resource Speech Recognition," Proc. 2022 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2022, 8187 – 8191.

[C3] Piyush Vyas, **Anastasia Kuznetsova** and Donald S. Williamson, "Optimally Encoding Inductive Biases into the Transformer Improves End-to-End Speech Translation," Proc. Interspeech, 2021, 2287 – 2291. *Winner of 2021 Interspeech Best Student Paper Award.*

[C2] **Anastasia Kuznetsova** and Francis Tyers, "A finite-state morphological analyser for Paraguayan Guaraní," Proc. of the First Workshop on Natural Language Processing for Indigenous Languages of the Americas, 2021, 81 – 89.

[C1] Anna Zueva, **Anastasia Kuznetsova** and Francis Tyers, "A finite-state morphological analyser for evenki," Proc. of The 12th Language Resources and Evaluation Conference (LREC), 2020, 2581 – 2589.

Employment

Amazon.com Services LLC — Cambridge, MA, USA
Applied Scientist Intern — May 2024 – August 2024

- Foundational models for multi-channel audio

Indiana University — Bloomington, IN, USA
Research Assistant — August 2023 – Present

- Discretized Speech Representations for ASR model complexity reduction.
- Supervisor: M. Kim

Google LLC Remote, IN, USA
Student Researcher September 2023 – December 2023

– Supervised clustering for speaker diarization.

Google LLC New York, NY, USA
Research Intern May 2023 – July 2023

– RL-based supervised clustering for speaker diarization.

Coqui.ai Remote, Willington, DE, USA
Research Intern, Text-to-Speech (TTS) June 2022 – August 2022

– Extraction of speaker attributes from SSL representations.

Indiana University Bloomington, IN, USA
Research Assistant August 2020 – May 2022

– SSL representation learning for mono-channel Speech Enhancement.

– Supervisor: D. Williamson

Rev.com Remote, Austin, TX, USA
Machine Learning Engineer Intern (STT) June 2021 – August 2021

– Curriculum Learning for ASR data complexity optimization.

Indiana University Bloomington, IN, USA
Research Assistant August 2019 – May 2020

– Low-resource speech recognition.

– Supervisor: F. Tyers

Teaching

Indiana University Bloomington, IN, USA
Assosiate Instructor Spring 2023

- ENGR-E 511 Machine Learning for Signal Processing

Indiana University Bloomington, IN, USA
Assosiate Instructor Fall 2022, Fall 2023

- ENGR-E 533 Deep Learning Systems

Awards

- *Luddy Outstanding Research Award* 2022
  Nominated as a graduate student for outstanding research by the Dept. of Computer Science, Luddy school of Informatics, Computing and Engineering, Indiana University.
- *Interspeech 2021 Best Student Paper Award* 2021

Skills

- **Research Area:** Speech and audio
- **Expertise:** Speech recognition, Speech enhancement, model complexity reduction, data optimization;
- **Programming Languages:** Python, C/C++;
- **Frameworks:** PyTorch, Tensorflow, ESPNet

Extracurricular

- **Reviewer** ICASSP 2023, 2024
- **Mentor** Google Summer of Code, Google Code-In 2018, 2019, 2020
- **Student Participant:** Google Summer of Code 2018