Maria Ryskina

Carnegie Mellon University
School of Computer Science
Language Technologies Institute
5000 Forbes Ave, Pittsburgh, PA 15213

mryskina@cs.cmu.edu
http://www.cs.cmu.edu/~mryskina/

EDUCATION

Carnegie Mellon University	Pittsburgh, PA
Ph.D. student, Language and Information Technologies	2016 – present
Advisors: Matthew R. Gormley, Eduard Hovy, Taylor Berg-Kirkpatrick	

Skolkovo Institute of Science and Technology	Moscow, Russia
M.Sc., Information Technology, with honors	2014 – 2016

Moscow Institute of Physics and Technology	Moscow, Russia
M.Sc., Applied Mathematics and Physics, with honors	2014 – 2016
B.Sc., Applied Mathematics and Physics, with honors	2010 – 2014

RESEARCH

Carnegie Mellon University — Pittsburgh, PA
Graduate Research Assistant — 2016 – present

- Doctoral research: learning computational models of non-standard orthographic, morphological, and lexical choices in written language, viewed both as user-specific idiosyncrasies and through the lens of large-scale language change.
- Advisors: Matthew R. Gormley, Eduard Hovy, Taylor Berg-Kirkpatrick

Massachusetts Institute of Technology — Cambridge, MA
Visiting Graduate Student, CSAIL Infolab — Sep 2015 – Jan 2016

- Master's thesis: generating visual representations of text for entailment detection.
- Mentors: Boris Katz, Andrei Barbu

Moscow Institute of Physics and Technology & Dorodnicyn Computing Centre of RAS — Moscow, Russia
Undergraduate Student, Intelligent Systems Subdept. — 2013 – 2014

- Undergraduate thesis: regularizing topic models for improving stability and interpretability.
- Advisor: Konstantin Vorontsov

WORK EXPERIENCE

DiDi Labs   www.didi-labs.com — Remote
Reseacrch Intern — May 2020 – Aug 2020

- Reinforcement learning for training task-oriented dialog agents in a self-play setting.
- Probing integer embeddings learned from mathematical data for number-theoretic knowledge.
- Mentor: Kevin Knight

Anti-Plagiat JSC   www.antiplagiat.ru   Moscow, Russia
Reseacrch Intern   Jun 2015 – Aug 2015
  · Evaluating topic search quality in the Russian State Library archives.

Awards and Honors

Diverse Intelligences Summer Institute Fellowship   2021
Templeton World Charity Foundation

Skoltech Academic Excellence Award, Russia   2016

State Academic Scholarship for research achievements, Russia   2013 – 2014

Abramov-Frolov Scholarship for academic achievements, Russia   2010 – 2012

Publications

* denotes equal contrubution

[Two Approaches to Building Collaborative, Task-Oriented Dialog Agents through Self-Play](#)
A. Arkhangorodsky, S. Fang, V. Knight, A. Nagesh, **M. Ryskina**, K. Knight
Preprint, 2021.

[Learning Mathematical Properties of Integers](#)
M. Ryskina, K. Knight
BlackboxNLP Workshop on Analyzing and Interpreting Neural Networks for NLP, 2021.

[SIGMORPHON 2021 Shared Task on Morphological Reinflection: Generalization Across Languages](#)
T. Pimentel*, **M. Ryskina*** *et al.*
SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology, 2021.

[Comparative Error Analysis in Neural and Finite-state Models for Unsupervised Character-level Transduction](#)
M. Ryskina, E. Hovy, T. Berg-Kirkpatrick, M. R. Gormley
SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology, 2021.

[NoiseQA: Challenge Set Evaluation for User-Centric Question Answering](#)
A. Ravichander, S. Dalmia, **M. Ryskina**, F. Metze, E. Hovy, A. W. Black
Conference of the European Chapter of the Association for Computational Linguistics (EACL), 2021.

[Phonetic and Visual Priors for Decipherment of Informal Romanization](#)
M. Ryskina, M. R. Gormley, T. Berg-Kirkpatrick
Annual Meeting of the Association for Computational Linguistics (ACL), 2020.

[Where New Words Are Born: Distributional Semantic Analysis of Neologisms and Their Semantic Neighborhoods](#)
M. Ryskina, E. Rabinovich, T. Berg-Kirkpatrick, D. R. Mortensen, Y. Tsvetkov
Annual Meeting of the Society for Computation in Linguistics (SCiL), 2020.

[OPERA: Operations-oriented Probabilistic Extraction, Reasoning, and Analysis (2019)](#)
E. Hovy *et al.*, including **M. Ryskina**
Text Analysis Conference (TAC), 2019.

[OPERA: Operations-oriented Probabilistic Extraction, Reasoning, and Analysis (2018)](#)
E. Hovy *et al.*, including **M. Ryskina**
Text Analysis Conference (TAC), 2018.

[Automatic Compositor Attribution in the First Folio of Shakespeare](#)
M. Ryskina, H. Alpert-Abrams, D. Garrette, T. Berg-Kirkpatrick
Annual Meeting of the Association for Computational Linguistics (ACL), 2017.

Invited Talks

Learning Computational Models of Non-Standard Language	Feb 2022
MCQLL Lab Meeting, McGill University	
Romanization with Friends: Deciphering Informally Romanized Text	Nov 2021
NLP With Friends Seminar Series	
Unsupervised Decipherment of Informal Romanization	Jun 2021
NLPhD Speaker Series, Saarland University	
Informal Romanization across Languages and Scripts	Jun 2021
SIGTYP Lecture Series	

Teaching

TA and Guest lecturer for CMU 11-711: Algorithms for NLP. Instructor: Yulia Tsvetkov.	Fall 2018
TA for CMU 11-711: Algorithms for NLP. Instructor: Taylor Berg-Kirkpatrick.	Fall 2017

Service

Organizing and professional service:
- Technical advisory group member for OpenITI Arabic-script OCR Catalyst Project, 2022
- Co-organizer for SIGMORPHON Shared Task 0: Generalization in Morphological Inflection Generation, 2021
- Co-host for SIGTYP Lecture Series, 2021

Reviewing:
- Journals: Cognitive Science (2021), Review of General Psychology (2021)
- Conferences: ARR (2021), ACL (2021), EMNLP (2021), CoNLL (2020–2021); as secondary reviewer: EACL (2021), EMNLP (2018, 2020)
- Workshops: *ACL SRW (2020–2021), NeurIPS HAMLETS (2020)

Volunteering:
- Co-organizer for oSTEM/Queer in AI Graduate School Application Review and Fee Aid Programs, 2021
- Student reviewer for CMU LTI Graduate Admissions, 2021
- Mentor for CMU SCS Graduate Application Support Program, 2020–2021
- Mentor for CMU LTI Peer Mentoring Program for new graduate students, 2021
- Mentor for CMU AI Mentoring Program for undergraduates from underrepresented groups, 2020