

Maria Ryskina

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<https://ryskina.github.io>

EDUCATION

Carnegie Mellon University <i>Ph.D., Language and Information Technologies</i> Advisors: Matthew R. Gormley, Eduard Hovy, Taylor Berg-Kirkpatrick	Pittsburgh, PA 2016 – 2022
Skolkovo Institute of Science and Technology <i>M.Sc., Information Technology, with honors</i>	Moscow, Russia 2014 – 2016
Moscow Institute of Physics and Technology <i>M.Sc., Applied Mathematics and Physics, with honors</i> <i>B.Sc., Applied Mathematics and Physics, with honors</i>	Moscow, Russia 2014 – 2016 2010 – 2014

ACADEMIC RESEARCH

Carnegie Mellon University <i>Graduate Research Assistant</i> <ul style="list-style-type: none">· Doctoral dissertation: Learning Computational Models of Non-Standard Language.· Advisors: Matthew R. Gormley, Eduard Hovy, Taylor Berg-Kirkpatrick	Pittsburgh, PA 2016 – 2022
Massachusetts Institute of Technology <i>Visiting Graduate Student, CSAIL Infolab</i> <ul style="list-style-type: none">· Master's thesis: generating visual representations of text for entailment detection.· Mentors: Boris Katz, Andrei Barbu	Cambridge, MA Sep 2015 – Jan 2016
Moscow Institute of Physics and Technology & Dorodnicyn Computing Centre of RAS <i>Undergraduate Student, Intelligent Systems Subdept.</i> <ul style="list-style-type: none">· Undergraduate thesis: regularizing topic models for improving stability and interpretability.· Advisor: Konstantin Vorontsov	Moscow, Russia 2013 – 2014

INDUSTRY EMPLOYMENT

DiDi Labs www.didi-labs.com <i>Research Intern</i> <ul style="list-style-type: none">· 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	Remote May 2020 – Aug 2020
JSC Antiplagiat www.antiplagiat.ru <i>Research Intern</i> <ul style="list-style-type: none">· Evaluating topic modeling-based corpus search methods for plagiarism detection.	Moscow, Russia Jun 2015 – Aug 2015

AWARDS AND HONORS

Diverse Intelligences Summer Institute Fellowship Templeton World Charity Foundation	2021
Skoltech Academic Excellence Award, Russia	2016
State Academic Scholarship for research achievements, Russia	2013 – 2014
Abramov-Frolov Foundation Scholarship for academic achievements, Russia	2010 – 2012

PUBLICATIONS

* denotes equal contribution

CONFERENCE AND WORKSHOP PAPERS

UniMorph 4.0: Universal Morphology

K. Batsuren*, O. Goldman* *et al.*, including M. Ryskina
Language Resources and Evaluation Conference (LREC), 2022.

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.

THESES

Learning Computational Models of Non-Standard Language

M. Ryskina

Ph.D. dissertation, Carnegie Mellon University, 2022.

OTHER PUBLICATIONS

State-of-the-art generalisation research in NLP: a taxonomy and review

D. Hupkes *et al.*, including M. Ryskina

Preprint, 2022.

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.

State-of-the-art generalisation research in NLP: a taxonomy and review

D. Hupkes *et al.*, including M. Ryskina

Preprint, 2022.

Number embedding application system

K. Knight, M. Ryskina

US Patent 11,460,982, 2022.

Self-play to improve task-oriented dialog systems and methods

K. Knight, M. Ryskina, A. Arkhangorodsky, A. Nagesh, S. Fang

US Patent Application 17/104,137, 2022.

Queer in AI

Organizers of Queer in AI, including M. Ryskina

XRDS: Crossroads, The ACM Magazine for Students, 28(4), 2022.

INVITED TALKS

Learning Computational Models of Non-Standard Language

LCC Lab, University of Toronto

EvLab, Massachusetts Institute of Technology

CLunch Seminar Series, University of Pennsylvania

MCQLL Lab, McGill University

Feb – Mar 2022

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:

- Co-organizer for the Queer in AI workshop at NAACL 2022
- 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: ACL Rolling Review (2021–2022), EMNLP (2021–2022), ACL (2021), CoNLL (2020–2021); as secondary reviewer: EACL (2021), EMNLP (2018, 2020)
- Workshops: Queer in AI (NAACL 2022), SRW (ACL 2020–2021, NAACL 2021, AACL 2020), HAMLETS (NeurIPS 2020)

Volunteering and community service:

- Co-organizer for oSTEM/Queer in AI Graduate School Application Review and Fee Aid Programs, 2021–2022
- 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