

# Maria Ryskina

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## EDUCATION

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### **Carnegie Mellon University, USA**

*Ph.D. student, Language and Information Technologies*

2016 – present

Advisors: Matthew R. Gormley, Eduard Hovy, Taylor Berg-Kirkpatrick

### **Skolkovo Institute of Science and Technology, Russia**

*M.Sc., Information Technology, with honors*

2014 – 2016

### **Moscow Institute of Physics and Technology, Russia**

Department of Control and Applied Mathematics

*M.Sc., Applied Mathematics and Physics, with honors*

2014 – 2016

*B.Sc., Applied Mathematics and Physics, with honors*

2010 – 2014

## RESEARCH

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### **Carnegie Mellon University**

2016 – present

*Graduate Research Assistant*

*Pittsburgh, PA*

- My research focuses on building computational models of non-standard orthographic, morphological, and lexical choices in written language, 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**

Sep 2015 – Jan 2016

*Visiting Graduate Student, CSAIL Infolab*

*Cambridge, MA*

- Master's thesis project: detecting paraphrases by sampling visual representations of sentences from a video description model and evaluating similarity between them.

Mentors: Boris Katz, Andrei Barbu

### **Moscow Institute of Science and Technology**

2013 – 2014

*Undergraduate Student, Intelligent Systems Subdept.*

*Moscow, Russia*

- Bachelor thesis project: increasing interpretability and stability of topic models by adding a human-informed regularizer.

Advisor: Konstantin Vorontsov

## WORK EXPERIENCE

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### **DiDi Labs, [www.didi-labs.com](http://www.didi-labs.com)**

May 2020 – Aug 2020

*Research Intern*

*Remote*

- Used reinforcement learning to train task-oriented dialog agents in a self-play setting.

Mentor: Kevin Knight

### **Anti-Plagiat JSC, [www.antiplagiat.ru](http://www.antiplagiat.ru)**

Jun 2015 – Aug 2015

*Research Intern*

*Moscow, Russia*

- Designed evaluation methods to measure topic search quality in the Russian State Library archives.

## AWARDS AND HONORS

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<b>Skoltech Academic Excellence Award</b> , Russia <i>Awarded to students graduating with 4.0 GPA</i>	2016
<b>State Academic Scholarship</b> for research achievements, Russia	2013 – 2014
<b>Abramov-Frolov Scholarship</b> for academic excellence, Russia <i>Charitable Foundation for the Development of Innovation Education</i>	2010 – 2012

## SELECTED COURSEWORK

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### Carnegie Mellon University

Machine Learning (10-701) ◊ Algorithms for Natural Language Processing (11-711) ◊ Advanced Multimodal Machine Learning (11-777) ◊ Probabilistic Graphical Models (10-708) ◊ Grammars and Lexicons (11-721) ◊ Neural Networks for NLP (11-747) ◊ Structured Prediction for Language and other Discrete Data (11-763)

### Skolkovo Institute of Science and Technology

Optimization Methods ◊ Representation and Deep Learning ◊ Bayesian Methods ◊ Data Mining

### Moscow Institute of Physics and Technology

Mathematical Analysis ◊ Linear Algebra ◊ Discrete Mathematics ◊ Functional Analysis ◊ Differential Equations ◊ Optimization Methods (theory) ◊ Algorithms and Models of Computation ◊ Probability Theory ◊ Mathematical Statistics ◊ Applied Statistics ◊ Machine Learning (theory)

### Online

Statistical Learning (Stanford)

## LANGUAGES AND SKILLS

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English (fluent), Russian (native)

Python, Java, C++, MATLAB

## PUBLICATIONS

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### NoiseQA: Challenge Set Evaluation for User-Centric Question Answering

A. Ravichander, S. Dalmia, **M. Ryskina**, F. Metze, E. Hovy, A. 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 system report)**

E. Hovy, J. Carbonell, H. Chalupsky, A. Gershman, A. Hauptmann, F. Metze, T. Mitamura, Z. Sheikh, A. Dangi, A. Chaudhary, X. Chen, X. Kong, B. Huang, S. Medina, H. Liu, X. Ma, **M. Ryskina**, R. Sanabria, V. Gangal

*Text Analysis Conference (TAC)*, 2019.

**OPERA: Operations-oriented Probabilistic Extraction, Reasoning, and Analysis  
(2018 system report)**

E. Hovy, T. Berg-Kirkpatrick, J. Carbonell, H. Chalupsky, A. Gershman, A. Hauptmann, F. Metze, T. Mitamura, A. Chaudhary, X. Chen, B. Huang, H. Liu, X. Ma, S. Palaskar, D. Rajagopal, **M. Ryskina**, R. Sanabria

*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.

## TEACHING

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11-711: Algorithms for NLP. TA for Taylor Berg-Kirkpatrick

Fall 2017

11-711: Algorithms for NLP. Guest lecturer and TA for Yulia Tsvetkov

Fall 2018

## SERVICE

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**Mentor:**

- CMU AI Mentoring Program for undergraduates from underrepresented groups (2020)
- CMU SCS Graduate Application Support Program for applicants from underrepresented groups (2020)

**PC member and/or reviewer:**

- Journals: Cognitive Science (2021)
- Conferences: ACL (2021), EMNLP (2021), CoNLL (2020–2021)
- Workshops: \*CL SRW (2020–2021), NeurIPS HAMLETS (2020)
- Secondary reviewing: EACL (2021), EMNLP (2018, 2020)

**Organizer:**

- SIGMORPHON 2021 Shared Task 0: Generalization in Morphological Inflection Generation