MARGARITA BOYARSKAYA

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PhD Candidate
NYU Stern Technology, Operations, and Statistics dept.

Education

09.2016 – 07.2022 (expected)	**PhD**, Information Systems **New York University**, New York, United States Selected coursework: Modern Statistics & Causal Inference, Causal Inference: Methods for Program Evaluation and Policy Research, Advanced Mathematics of Data Science, Inference & Representation, Natural Language Processing.
06.2009 – 07.2014	**MS**, **BSc**, Theoretical Mathematics **Lomonosov Moscow State University**, Moscow, Russia Major: Abstract Algebra. GPA: 4.4/5.0

Work Experience

03.2020 – 06.2020	Research Intern **Microsoft Research**, Fairness, Accountability, Transparency & Ethics group New York City, United States Collaborators: Prof. Alexandra Olteanu and Prof. Kate Crawford. Project: a taxonomy and a crowdsourced survey of potential harms of Information Retrieval systems. Presented work at NeurIPS 2020 conference, NBIAIR workshop. Co-authored an article 'Responsible Computing During COVID-19 and Beyond', published by Communications of the ACM.
05.2019 – 09.2019	Research Intern **Microsoft Research**, Fairness, Accountability, Transparency & Ethics group New York City, United States Collaborators: Prof. Solon Barocas and Prof. Hanna Wallach. Project: a study of the proxy variable problem and a framework for resolving inconsistent treatment of proxy variables. Presented findings at NeurIPS 2019 HCML workshop, ICML 2020 Law & ML workshop, and NYU CDS Math & Democracy seminar.
05.2017 – 01.2018	Research Fellow **Jain Family Institute** New York City, United States

FELLOWSHIPS & AWARDS

2021	Doctoral Fellow **NYU Fubon Center** for Technology, Business, and Innovation
2019, 2020, 2021	Student Fellow **NYU Law School**, Information Law Institute, **Privacy Research Group**

RESEARCH

[In preparation] *Causal Models for Counterfactually Fair Classification Under Selection Bias.*
Joint work with Prof. Joshua Loftus (LSE).
Work-in-progress presented at: **AAAI AIES 2020** (one of 15 selected student posters), **MLSS Tuebingen 2020**. One of 8 selected oral presentations at **WiML 2019**.

[Under review at a top-ranked business journal] *Theoretical Characteristics of Delta-Margin Voting in Crowdsourcing.*
Joint work Prof. Panos Ipeirotis (NYU Stern).
Work-in-progress presented at: **HCML 2019**, **CI 2019** (selected oral presentation).

[In progress] *What Is a Proxy and Why Is It a Problem?*
Joint work with Prof. Solon Barocas and Prof. Hanna Wallach (Microsoft Research).
Work-in-progress presented at: **ICML 2020 Law & Machine Learning** workshop, NYU CDS Math & Democracy seminar 2019, **NeurIPS 2019 HCML** workshop.

[Accepted article] *Individual Harms in IR.*
Joint work with Prof. Alexandra Olteanu and Prof. Kate Crawford (Microsoft Research).
Presented at the **NeurIPS 2020 NBIAIR** workshop.

[Published *perspectives* article] *Responsible Computing During COVID-19 and Beyond.*
Barocas S., A. J. Biega, **M. Boyarskaya**, K. Crawford, H. Daumé III, M. Dudík, B. Fish, M. L. Gray, B. Hecht, A. Olteanu, F. Poursabzi-Sangdeh, L. Stark, J. Wortman Vaughan, H. Wallach, M. Zepf
Communications of the ACM, July 2021, Vol. 64 No. 7.

SERVICE & INITIATIVE

2021	ACM Fairness, Accountability, and Transparency conference (**FAccT**) **Program Committee** member, **reviewer**.
2020 – present	**Causality & Fairness Reading Group** Founded a monthly, cross-continental faculty and student-led reading group on the intersection of data science and social good. Co-organized, curated literature selection, and managed membership and outreach (with Prof. Jennifer Hill and Ravi Sojitra).

| 2019 | Women in Machine Learning (**WiML**) workshop at NeurIPS 2019
Reviewer |

Teaching

06.2019 – 09.2019	Taught an undergraduate course **Introduction to Programming & Data Science** at NYU Stern. Course evaluation: 5.0/5.0, instructor evaluation: 5.0/5.0
03.2019 – 04.2019	Assisted Prof. Solon Barocas on the **Data Privacy & Ethics** class taught to the NYU Stern MSBA cohort. Graded all assignments and essays, authored long-form feedback to students.
02.2019 – 03.2019	Prepared teaching materials on AI Fairness for Prof. Natalia Levina's Digital Innovation course taught to NYU Stern MBA cohort.

Additional Education

OxML 2021	Selected participant (15% acceptance rate) **Oxford Machine Learning Summer School** Co-organized by AI for Global Goals & CIFAR **University of Oxford**, UK (remote)
MLSS Tübingen 2020	Selected participant (120 out of 1600 applicants) **Machine Learning Summer School** **Max Planck Institute,** Tuebingen, Germany (remote)
SICSS 2020	Selected participant, invited as a speaker **Summer Institute in Computational Social Science** **UCLA**, California (remote)
M^{2}LSS 2020	Selected participant **Mediterranean Machine Learning Summer School** Milan, Italy (remote)

Skills

| Natural languages | English (native-equivalent), Russian (native), Persian (intermediate), French (basic), East Circassian (basic/heritage speaker) |
| Programming & tools | Python, R, Matlab, SQL
Past experience in C, C++, JavaScript + HTML, SageMath, High Performance Computing (HPC) |