

Nikita Karagodin

 [website](#) |  [nikitus](#) |  [github](#) |  nikitus@mit.edu

EDUCATION & TECHNICAL SKILLS

2023 - now	Ph.D. in Computer Science , Massachusetts Institute of Technology
2017 - 2023	B.Sc. & M.Sc. in Mathematics , Saint Petersburg State University
2019 - 2022	Data Science Program , Computer Science Center
Relevant Coursework	Machine Learning, Deep Learning, Inference & Information, Statistics, Algebra
Languages & Libraries	python, pytorch, numpy, pandas, matplotlib, git

WORK EXPERIENCE

MIT LIDS, Research Assistant	September 2023 - now
– Research project on clustering effect for transformers	
Huawei Technologies, R&D team, Senior Engineer	December 2022 - July 2023
– Designed and implemented experiments using the OpenFL framework for FL research project	
EIMI, Researcher	June 2021 - August 2023
– Research project on product quantization	
Pinely (HFT firm), R&D team, Data Scientist	April 2022 - August 2022
– Analyzed market data using ML techniques to extract relevant features	
– Explored cross-exchange arbitrage strategies	
Lyceum 239 (St. Petersburg), Math center, Volunteering Teacher	2017 - 2021

PUBLICATIONS

N.Karagodin, Y.Polyanskiy, P.Rigollet, **Clustering in Causal Attention Masking**, NeurIPS 2024.
N.Karagodin, *A limit theorem for the last exit time over a moving nonlinear boundary for a Gaussian process*, Probability and Mathematical Statistics, 2022, Vol. 42, Fasc. 2, pages 195 - 217
N.Karagodin, M.Lifshits, *On the distribution of the last exit time over a slowly growing linear boundary for a Gaussian process*, Theory of Probability and Its Applications, 2021, 66:3, 337–347

INVITED TALKS

<i>Clustering Within Causal Transformer Attention Dynamics</i> ,	2024
Interacting Particle Systems in Data Science: From Theory to Applications, SIAM MDS	
<i>On the distribution of the last exit time over a slowly growing boundary for a Gaussian process</i> ,	2021
New Trends in Mathematical Stochastics, EIMI	

ACHIEVEMENTS

• International Mathematical Competition, grand first prize (top 1.5%)	2020
• Student research competition Möbius Contest, second prize	2021
• Student research competition by HSE & Siberian.Capital, first prize	2022
• International Mathematical Olympiad, silver medal (top 19%)	2016
• Russian Mathematical Olympiad, gold medal (top 4%)	2016